50X1-HUM

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Modern, efficient plants of all capacities, with pneumatic cleaning and conveying systems for grain and ground products.

Machines and equipment of silos of all capacities; pneumatic conveyors, and installations for unloading grain from ships.

STAT

Our products are famous by the accuracy of their design and construction, and the high quality of materials used.

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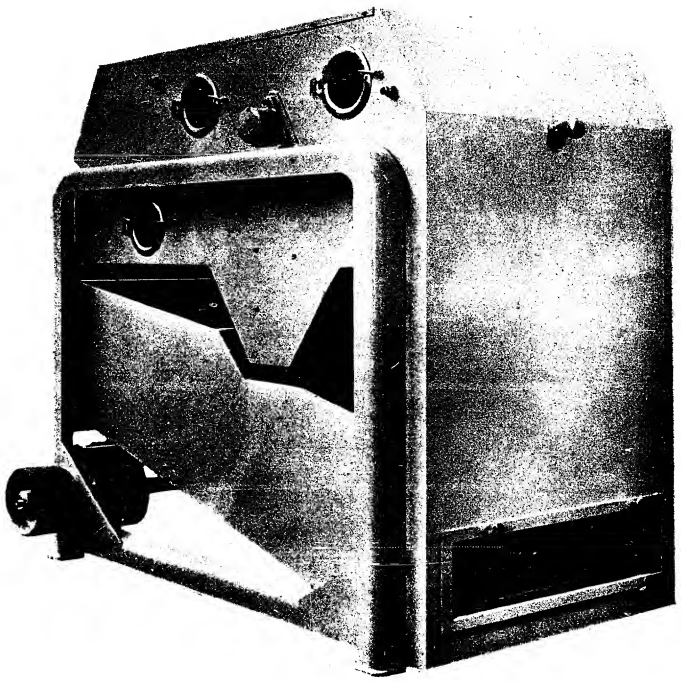

Combined Cleaner and Separator for Flour Mills and Granaries, Type SEM and SES

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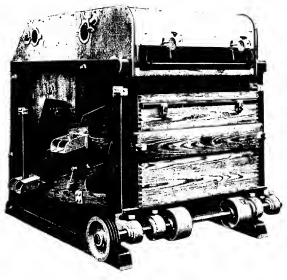
OCRIM
CREMONA (ITALIA)

Combined Cleaner and Separator for Flour Mills and Granaries, Type SEM and SES



Application

The cleaner is one of the most essential machines in a mill cleaning-room, and is used to remove particles of dust and other similar objects from grain.

Description

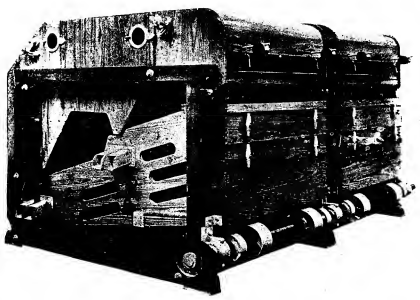
The unit is made of wood or metal, and it consists of a ventilating chamber, air ducts and an oscillating body consisting of three sieves arranged one above another. The frame containing the sieves is suspended by means of steel springs, from the machine structure. The feature of the design is that this frame may be readily removed and replaced by another with different meshes of the sieves. The sieves are cleaned by means of rubber balls, of specified weight, which are free to move beneath the sieves. The machine is driven by an eccentric disc placed on a shaft the ends of which are supported by ball bearings, thus ensuring constant oscillation. The machine is perfectly balanced. In the roomy ventilating chamber, there are three valves which regulate the air stream which acts upon the ground product at the entry into and the exit out of the machine. The ventilating system may be central, or it may constitute an independent body, such as is the case with a separator with a built-in fan.

Operation

Upon entry into the machine, the grain is subjected, by means of the first valve, to the action of the first ventilation; during further movement, the grain is exposed to the action of the second ventilation, falling afterwards on to the first sieve which contains holes of such a size as to retain large foreign objects, these being rejected from the machine through a port specially arranged for this purpose. The grain continues its progress, and falls on to the second sieve, which removes from it foreign objects of a smaller size. After this, the grain falls on to the third sieve and is cleaned from the remaining impurities, such as dirt and sand, and, finally, it is freed from dust by means of the second ventilation. Thus, the product obtained is completely free from all impurities and foreign objects, and the further classification of the grain, both qualitatively and quantatively, is easily controlled.

Size	Machine Dimensions Length mm	Width mm	Height mm	Sieve Dimensions Length mm	Width mm	Output in 100 kg per hour	RPM	Power required Without Fan CV	With Fan CV	Approximate Weight Net kg	Gross kg	Overseas shipping weight kg	Overseas Grale Volume m³	Cable Code
COMBINED CLEANER WITH SEPARATOR, TYPE SEM														
512	2140	1118	1540	1200	500	10 — 15	400	0.8	2.8	440	510	560	5.4	semba
612	2140	1218	1540	1200	600	15 — 20	400	0.8	2.8	470	545	600	5.8	semrf
812	2140	1458	1540	1200	800	20 — 25	400	1.1	3.9	515	605	670	6.8	semsu
1012	2140	1658	1540	1200	1000	30 — 40	400	1.3	4.4	560	660	730	7.2	semey
1212	2140	1858	1540	1200	1200	40 — 50	400	1.5	5.5	620	730	810	7.7	semox
COMBINED CLEANER WITH SEPARATOR TYPE SES FOR GRANARIES														
615	2240	1218	1820	1500	600	75 — 100	400	0.8	2.8	510	585	635	7.0	sesga
815	2240	1458	1820	1500	800	125 — 150	400	1.2	4.0	550	630	690	8.2	sesol
1015	2240	1658	1820	1500	1000	175 — 200	400	1.4	5.5	595	700	780	9.2	sesmy
1215	2240	1858	1820	1500	1200	225 — 250	400	1.6	5.6	650	770	850	10.2	sesix

FIGURES AND DATA ARE AT THE DISCRETION OF THE MANUFACTURER



Double Combined Cleaner and Separator for Flour Mills and Granaries, Type SEMD and SESD

Data from the following table correspond to Double Separators, Type SEMD and SESD shown on the preceding page

Size	Machine Dimensions			Sieve Dimensions		Output in 100 kg per hour	RPM	Power required		Approximate Weight			Overseas Crate Volume m³	Cable Code
	Length mm	Width mm	Height mm	Length mm	Width mm			Without Fan CV	With Fan CV	Net kg	Gross kg	Overseas shipping weight kg		
DOUBLE COMBINED CLEANER WITH SEPARATOR TYPE SEMD														
512	2140	1843	1540	2x1200	2x 500	20 — 30	400	1.5	5.0	920	1030	1105	8.3	timba
612	2140	2043	1540	2x1200	2x 600	30 — 40	400	1.5	5.0	980	1105	1180	9.1	timil
812	2140	2483	1540	2x1200	2x 800	40 — 50	400	2.0	6.0	1090	1235	1330	10.9	timsu
1012	2140	2883	1540	2x1200	2x1000	60 — 80	400	2.4	8.1	1160	1320	1435	12.5	timey
1212	2140	3283	1540	2x1200	2x1200	80 — 100	400	2.9	9.4	1300	1475	1600	14.1	timox
DOUBLE COMBINED CLEANER WITH SEPARATOR TYPE SESD FOR GRANARIES														
615	2240	2043	1820	2x1500	2x 600	150 — 200	400	1.5	5.0	1050	1180	1260	11.1	tisga
815	2240	2483	1820	2x1500	2x 800	250 — 300	400	2.2	7.1	1150	1305	1405	13.3	tisol
1015	2240	2883	1820	2x1500	2x1000	350 — 400	400	2.6	8.2	1260	1435	1545	15.2	tismy
1215	2240	3283	1820	2x1500	2x1500	450 — 500	400	3.0	9.6	1340	1530	1650	17.2	tisx

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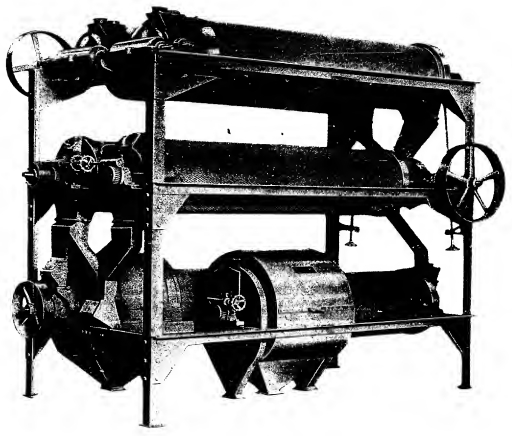


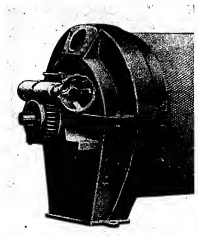
Set of High-Yield Cockle Cylinders

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

High-Yield Cockle Cylinders, Types MCSV, MCSA, MCRV and MCRA

Application

High-Yield Cockle Cylinders of our manufacture are of an excellent construction and are perfectly suited to meet the requirements of the cleaning room of modern flour mill. The cylinders are used to remove from the grain foreign objects of different shapes.



The trough adjustment

Description

A High-Yield Cockle Cylinder, as its name itself implies, consists of a cylinder made of special steel sheet which is dimpled. The ends of the cylinder are closed by means of two special castings which are called the cylinder heads.The size of the dimples corresponds to the shape of the grain, or of vetch, barley, oats, which is to be removed from wheat. At its both ends, the shaft is attached to the castings, and is supported by ball bearings. The shaft also carries a trough with a conveying worm which pushes along the grain that has fallen into the trough. The adjustments of the trough can be made by means of a wheel on the outer side of the machine. The high-yield cockle cylinder according to the wish of the buyer, may be so designed as to be driven either directly or by means of a gearbox in a housing filled with oil. The number of high-yield cockle cylinders to be installed depends on the type of grain wich is to be separated, and they are arranged in a set mounted on a structure of angle section members. The first or the initial cylinders are mounted on the top of that structure, while the cylinders wich receive the classified product, are fed by gravity. The whole arrangement is such as to enable easier operation and require lesser floor space. High-yield cockle cylinders, both individual ones and those mounted in a set, are equipped with a ventilating port.

Operation

Wheat enters the cylinder through a special opening and, through the rotation of the machine, is dissipated on to the walls of the cylinder. While grains of wheat, thrown back from the dimples, move gradually towards the exit opening under the influence of the arrangement of the dimples, foreign objects, collected in the dimples, are carried upwards and into the trough whence the worm removes them out of the machine.

It happens frequently some of the larger grains, as well as the crushed ones, are collected by the dimples and thus removed from the machine together with other foreign objects. In that case yet another cylinder or a set of cylinders should be installed for the purpose of additional separation of the crushed or the smaller sized grains from foreign matter (or different seeds).

High-Yield Cockle Cylinder, Type MCSV for Round Grains and Type MCSA for Ovol Grains

Size	Cylinder Dimensions		Machine Dimensions			Output in kg. of wheat per hour	R. P. M.	Approximate Weight			Overseas Cable Address	Cable Code
	Diam. mm	Length mm	Length mm	Width mm	Height mm			Net kg.	Gross kg.	Overseas shipping weight kg.		
3080	300	800	1515	360	415	500— 550	50	127	157	177	0.30	altac
3010	300	1000	1715	360	415	600— 700	50	137	167	187	0.35	altmc
4010	400	1000	1755	470	520	800— 950	48	152	187	200	0.50	altir
4015	400	1500	2255	470	520	1300—1500	48	184	229	260	0.65	altwo
5015	500	1500	2290	550	595	1900—2150	46	225	280	317	0.85	altuy
5020	500	2000	2790	550	595	2500—2800	46	260	330	377	1.05	altba
6020	600	2000	2840	685	743	3800—4200	44	351	446	510	1.70	altep
6025	600	2500	3340	685	743	4800—5250	44	390	525	615	2.00	altfi
7025	700	2500	3385	830	905	5300—5700	42	516	676	782	2.90	altku
7030	700	3000	3885	830	905	6000—6500	42	559	759	892	3.30	altox

Length and weight of the machine refer to the Cockle Cylinder directly driven.

For the machine with right angle drive, delivered at special order, this data are slightly increased.

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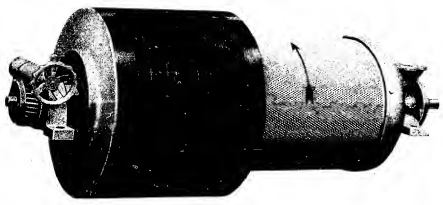
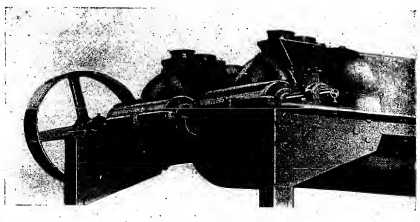


High-Yield Cockle Cylinder,
Type MCRV for Round Grains and Type MCRA for Oval Grains

Size	Cylinder Dimensions		Machine Dimensions			Cockle Cylinders Output in kg. of wheat per hour	R.P.M.	Approximate Weight			Overseas Cable Volume m³	Cable Code
	Diam. mm	Length mm	Length mm	Width mm	Height mm			Net kg.	Gross kg.	Overseas shipping weight kg.		
4080	400	800	1375	540	540	1000—2000	24	127	157	184	0.50	ripeg
5080	500	800	1405	640	640	2500—3500	23	170	210	237	0.70	ripla
5010	500	1000	1605	640	640	4000—5000	23	182	232	265	0.85	ripul
5012	500	1250	1855	640	640	5500—6500	23	197	264	309	0.90	ripux

Length and weight of the machine refer to the Cockle Cylinder directly driven.
For the machine with right angle drive, delivered at special order, this data are slightly increased.

FIGURES AND DATA ARE AT THE DISCRETION OF THE MANUFACTURER



The cylinder heads with joint drive

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Helicoidal Separator, Type MSE

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Helicoidal Separator, Type MSE

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Application

The helicoidal separator is used for further cleaning of the products. This is an apparatus which employs of the centrifugal force to separate other kinds of grain from wheat.

Operation

Vetch and round grains (large size grains), separated within the separator, when they fall in the upper part of the hopper, in which there is a valve to adjust the flow of the grains, begin their helicoidal movement downwards, while, at the same time, they are automatically separated in relation to their specific weights. In fact, the round-shaped grains, as well as those of a greater weight, which are mainly vetch, are of a greater specific weight than other kinds of foreign matter and are separated at the end of the helical path with almost mathematical precision, thus making possible the use of both kinds of products.

Dust and other light particles, which move at a very low speed, fall along the central shaft — tube.

Type	Apparatus Dimensions			Output kg./hour	Approximate Weight			Overseas Crate Volume m³	Cable Code
	Height mm	Maximum Diameter mm	Minimum Diameter mm		Net kg.	Gross kg.	Overseas shipping weight kg.		
MSE	1880	500	320	100	30	50	80	0.8	sepoi

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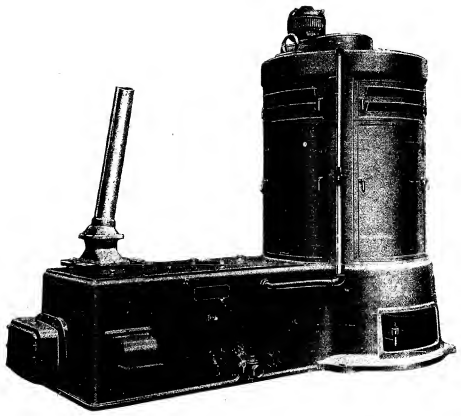


Combined Washer, Stoner and Whizzer, Type MGL

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Combined Washer, Stoner and Whizzer, Type MGL

Application

The combined washer, stoner and whizzer is a machine of an exceptional importance in the flour mill cleaning department. It serves not only to remove the heavy foreign objects (gravel, sand, etc.), but also to separate small amounts of earth stuck to the surface of the grains as well as to remove other foreign objects. In addition, the grains, thus moistened, facilitate the grinding process and enable the production of even whiter flours with as low a percentage of ash as possible.

Drive with electric power

Description

The machine consists of a trough and whizzer column, both made in a single casting. The trough is equipped with an inlet hole with a duct which enables an increase, or a decrease, of the flow or of the duration of the washing, which is dependent on the impurities in the grains, as well as the inherent moisture of grain. With the exception of Type 4, which is equipped with two pairs of worms, Types 1, 2 and 3 have two single worms placed one above another. The upper worm conveys the grain to the whizzer, while the lower one collects foreign objects in a special vessel. The worm, which serves to remove various foreign objects is driven by a special device connected to the whizzer rotor, through a gearing installed in a housing filled with oil on the upper worm. Thus, the machine is driven by a combined device on the whizzer column itself.

The special vessel is equipped with perforated tube, which has the purpose of dispersing the foam, as well as with a shower controlled by a special valve. The vessel is also fitted with an outlet port, equipped with a water level regulating valve as well as a shut-off valve.

The vertical column of the whizzer is surrounded by a sheet housing which can be easily dismantled and re-assembled. Within the whizzer, there are three wheels, equipped with vanes which rotate and lift the grains. The column is equipped with a housing washing device which is controlled by a cock. On the top of the whizzer column, that is on the head which is a casting, there is an outlet through which the wheat leaves the machine. The driving motor is also installed on the head of the apparatus.

Operation

Upon entry into the machine, wheat is conveyed, by means of the upper worm, which is partially immersed, into the whizzer. Moving along this path, the gravel and other foreign objects fall on to the lower worm which carries them out of the machine. Having reached the whizzer, wheat is pushed upwards by the vaned wheels and dispersed by the air stream and kept on the sides of the sheet housing by the centrifugal force. and there the grains are freed from all impurities and are dried.

Size	Machine Dimensions			Drum Dimensions		Output in kg. per hour	Average consumption of water litres/hour	Power required C.V.	R. P. M.	Approximate Weight			Overseas Crate Volume: m³	Cable Code
	Length mm	Width mm	Height mm	Diam. mm	Height mm					Net kg	Gross kg	Overseas shipping weight kg.		
0	1475	716	1480	450	1100	300 – 400	400	2.0	550	460	525	555	2.0	colsa
1	1701	860	1619	505	1157	500— 800	600	3.0	600	620	695	730	2.5	colik
2	2094	896	2221	500	1575	1100—1500	900	4.1	600	1000	1100	1250	6.1	colwe
3	2790	1350	2525	700	1657	1900—2600	1400	5.4	500	1990	2180	2380	11.0	colod
4	2790	1350	2525	700	1657	3000—4000	1800	5.6	500	2080	2270	2470	11.0	colux

Combined Washer, Type MGL—4, is equipped with two worms; Type MGL—O has no worms.
Height of the machine refers to the Washer with right angle drive.

FIGURES AND DATA ARE AT THE DISCRETION OF THE MANUFACTURER

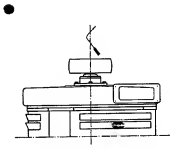
Combined Washer, Type MGL-O

We recommend to flour mills of lower capacity our combined washers equipped with a wheat-carrying worm, but without the worm which removes foreign objects. The latter are collected into a special basket. A regulating door ensures complete removal of all foreign objects from wheat.

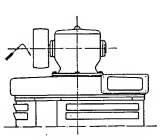
The machine ensures effective washing of wheat and complete removal of foreign objects just the same as the larger machines of this kind.

Different methods of powering the machine

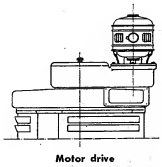
All types of our combined washers may be delivered either with a direct drive or with a joint drive by means of gears enclosed in a special housing filled with oil. Also, they can be driven individually by means of electromotors and tapered belts. The different methods are shown below.



Direct drive



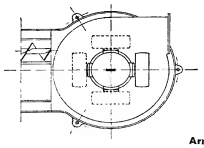
Right-angle drive



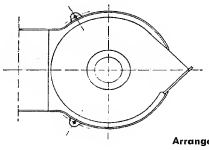
Motor drive

Installation of the Whizzer Head

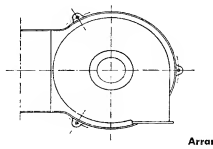
There are eight different ways of installing the Whizzer Head, and which of those eight ways is to be used depends on the existing arragement of the mill. The joint drive or the motor drive may be arranged as shown in the following figures.



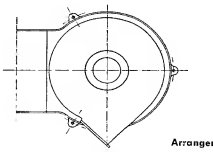
Arrangement 1



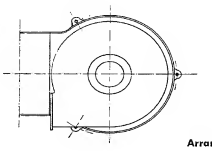
Arrangement 2



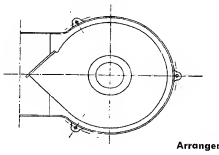
Arrangement 3



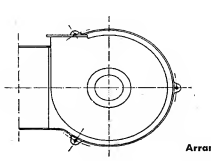
Arrangement 4



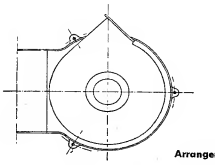
Arrangement 5



Arrangement 6



Arrangement 7



Arrangement 8

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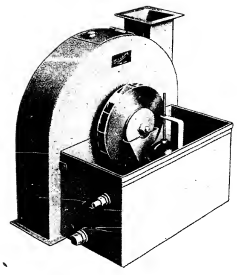
Automatic Moistener, Type MBT

UNDER LICENCE
CRIM
CREMONA (ITALIA)

Automatic Moistener, Type MBT



Application

The apparatus is widely used in all mills to control the wheat moisture automatically.

Description

The Automatic Moistener, Type MBT, consists of a hydraulic wheel which is supported by ball bearings. The wheel is rotated by wheat itself which passes through the machine. The wheel is enclosed in a housing of strong sheet steel. The water level is kept constant and controlled by means of a float which cuts off automatically the water supply as soon as wheat ceases to enter the apparatus.

The main feature of the apparatus is that it does not need any driving power and that it regulates the water supply automatically. This guarantees perfect operation of the apparatus.

Type	Dimensions of Wheel ∅ mm	Output kg/hour	Approximate Weight			Overseas Crate Volume m³	Cable Code
			Net kg	Gross kg	Overseas shipping weight kg		
MBT 110	485 × 110	2000	28	42	52	0.30	bagro
MBT 180	485 × 180	3500	35	49	59	0.34	bagsu

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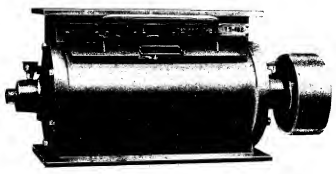

Wheat Mixing Apparatus, Type MMI

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Wheat Mixing Apparatus, Type MMI

Application

The Wheat Mixing Apparatus is installed in the outlet ducts of the granary cells and wheat-storing chambers in order to ensure accurate and constant mixture as well as an adequate control of production.

Description and operation

The apparatus consists of a single piece cast body, within which a drum is rotated. The drum is supported by ball bearings. Inside the rotor, there are adjustable compartments for different percentages ranging from 5% to 100% inclusive in 5% increments. The system is controlled by means of inlet shutters which control the output per hour as shown on the table below. The desired percentages are in close relation to the rotating speed of the drum.

The apparatus is equipped with a port which enables the passage of grains on the ontside of the rotating drum with an adequate provision for accelerating the washing process. A special window is provided for to inspect the inner parts of the apparatus.

Size	Maximum Output in kg per hour at given R.P.M.							Power required C.V.	Approximate Weight			Overseas Crate Volume m³	Cable Code
	6	8	10	12	14	16	18	20		Net kg	Gross kg	Overseas shipping weight kg.		
15	432	576	720	864	1008	1152	1296	1440	0.2	45	55	65	0.08	misga
20	1350	1800	2250	2700	3150	3600	4050	4500	0.3	115	125	140	0.15	misox

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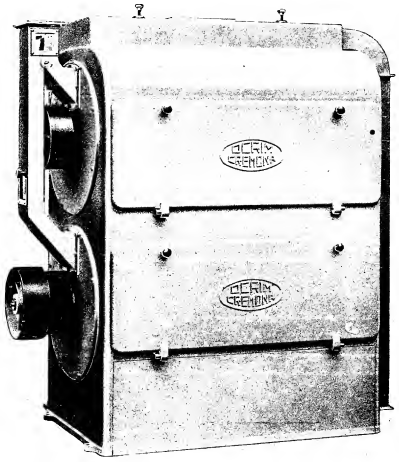
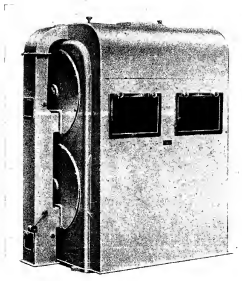


Double High-Yield Scourer, Type MSGARD

UNDER LICENCE
OCRIM
CREMONA ITALIA

Double High-Yield Scourer, Type MSGARD



Application

The Double High-Yield Scourer is used in flour mills of medium and high capacities where perfect cleaning is required, and its application follows the initial washing and storing.

Description

The machine consists of two drums of metal mesh of a great strength, and in those drums there is a rotor supported by ball bearings.

The unit is enclosed within a ventilating chamber made of iron steel. Special classification valves in the ventilating chamber enable classification — in relation to weight and diameter of various foreign objects. By special order, the construction may be made of wood.

Operation

Wheat, upon entering into the drums, is subjected to rotation by means of an internal mechanism which distributes the wheat along the perimeter of the drum. The speed of the hammer and the operation of special vanes, fixed to the rotor, perform a separation of husks which enclose the grain, giving the husks glossy appearance. The central ventilation chamber ensures complete removal of dust. High yield, minimum power required, cheap maintenance, and very easy replacement of all parts, are the main features of this very modern machine which is in high esteem everywhere.

Size	Shell Dimensions		Machine Dimensions			Output in kg/hour		R.P.M.	Approximate Weight			Overseas Crate Volume m³	Cable Code
	Diam. mm.	Length mm.	Length mm.	Width mm.	Height mm.	Drums in parallel	Drums in series		Net kg.	Gross kg.	Overseas shipping weight kg.		
3570	350	700	1345	640	1340	1000	500	700	385	470	520	2.0	spabi
5010	600	1200	1800	1035	2030	1600	800	300	890	1050	1130	5.6	spaga
712	700	1400	1800	1035	2030	3000	1500	300	1220	1380	1460	5.6	spavo
714	700	1400	2000	1035	2030	4000	2000	300	1300	1490	1580	6.1	spalu

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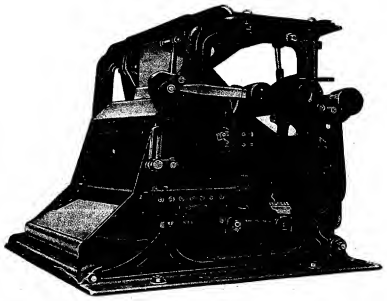

Automatic Balance, Type GW

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Automatic Balance, Type GW

Application

The Automatic Balance is used to weigh raw materials in mixed state in granaries and mills. It can be installed below the separator, thus enabling control of raw materials entering the cleaning-section of the mill, or prior to the entrance of grains into the first scouring machines, thus providing for manyfold control of the wheat which is sent to the mill units and of foreign objects which are separated from the grain in the cleaning-machines.

Description

The Automatic Balance consists of weighing mechanism, receiving and delivery departments, regulating and controlling systems, and an automatic counter. Great sensitivity of the balance guarantees absolute accuracy with no adverse effects upon its service life. On special order, the balance may be equipped with a compartment to weigh residuals, an automatic shut-off assembly for wheat in pre-determined quantities, as well as a casing made of iron sheet for protection of the balance which is practically unaffected by dust. The weighing capacity of normal type balances is 1500 kgs (approximately 3300 lbs), and special type balances may have capacities of up to 5000 kgs (approx. 11000 lbs).

Operation

All operations of the balance are conditioned by gravity. Raw materials fall through the inlet charging opening into the weighing basket. When the charge weight becomes equal to the counterweight, filling of the basket stops and the basket is turned over, whereupon the contents are poured out and the basket returns to its original position. In the meantime, the automatic counter registers the number of kilograms weighed. The whole operation is fully automatic.

Size	Weigher Dimensions			Weighing Capacity (Wheat and Rye) kg.	Output in kg/hour (Wheat and Rye)	Approximate Weight			Overall Unit Volume m³	Cable Code
	Length mm	Width mm	Height mm			Net kg.	Gross kg.	Overseas shipping weight kg.		
5	565	500	485	5	1650	80	125	130	0.4	bilre
10	565	570	485	10	2800	95	140	145	0.5	bilux
15	665	605	575	15	3800	130	180	190	0.6	bilno
20	665	705	575	20	5000	135	185	200	0.7	bilis
30	840	710	720	30	7000	210	275	290	1.0	bilac
50	840	945	720	50	11000	220	310	330	1.0	bilon
75	1105	1025	925	75	16000	390	515	535	1.6	bilez
100	1105	1025	925	100	20000	410	530	550	1.6	bilwi
150	1300	1300	1095	150	26000	700	900	1000	3.1	bilba
200	1300	1540	1095	200	33000	825	1050	1125	3.9	bilyp

Note: When requesting quotation for Weigher, state the Type of cereals to be measured.

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Magnetic Separator, Type MAM

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Magnetic Separator, Type MAM

Application

The Magnetic Separator serves to remove from wheat small metal particles, which may be found in wheat, thus precluding extensive damage to the mill and sifting units.

Normally, the apparatus is installed in front of the cleaning-machines and at the exit from the cleaning-machines prior to the first scouring.

Description and operation

This is a static apparatus which requires neither driving power nor any particular maintenance care; it consists of a single high efficiency magneto the length of which depends on the quantity of wheat which passes over it.

Wheat, whose movement is controlled by a special bolt, slowly flows over the magneto which retains the small metal particles. Periodically, those metal particles are removed in the mill cleaning-section.

Apparatus Size	Dimensions			Magneto Length mm	Output kg/hour	Approximate Weight			Overseas Crate Volume m³	Cable Code
	Length mm	Width mm	Height mm			Net kg.	Gross kg.	Overseas shipping weight kg.		
2	246	235	330	166	600	8	11	13	0.025	mamsc
3	330	235	330	250	900	9	12	14	0.030	mamib
4	414	235	330	334	1200	10	14	16	0.035	mamwo
5	498	235	330	418	1500	12	16	18	0.040	mamzy
6	582	235	330	502	1900	15	19	21	0.045	mampu
7	665	235	330	586	2200	18	22	25	0.050	mamal
8	750	235	330	670	2500	22	26	29	0.055	mamye
9	834	235	330	754	2900	25	29	32	0.060	mamga
10	918	235	330	838	3300	29	33	36	0.065	mamui
11	1002	235	330	922	3900	34	38	41	0.075	mamox

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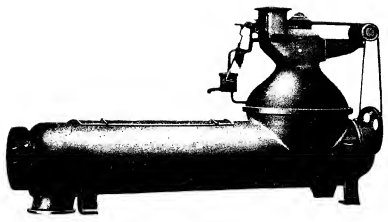

Wheat Damping Worm, Type MNE

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Wheat Damping Worm, Type MNE

Application

The object of the Damping Worm is to moisten wheat superficially. Thus, the grain husk becomes more elastic and less easily crumbled, yielding soft flour with a small percentage of ash.

Description and operation

The machine is a single piece casting equipped with an automatic water regulator and a wheat-conveying worm. The water enters, through a special regulator, into the machine head and there it is atomized by a blower into a kind of fog. This fog fills the cylinder body through which wheat passes, thus ensuring light and uniform moistening of the surface of wheat.

Type	Dimensions			RPM	Power required CV	Output kg/hour	Approximate Weight			Overseas Crate Volume m³	Cable Code
	Length mm	Width mm	Height mm				Net kg	Gross kg	Overseas shipping weight kg		
MNE	1700	990	490	80	1.5	3000	270	310	330	0.9	nebia

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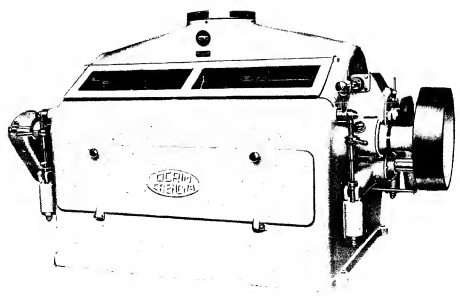

Double Roller Mill, Type LM

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Double Roller Mill, Types LM 52 and LP 52

Application

The Roller Mill is the most important machine of the mill since its duty is to crumble grain gradually, and by grinding to transform it into flour.

The roller mill actually performs the act of grinding. Therefore it is imperative that all its component parts operate perfectly, in order to achieve the best possible efficiency both qualitatively and quantitatively.

Single piece cast housing

Description

The housing of a roller mill is mechanically cast in a single piece. It encloses the following component parts of the roller mill: automatic feeding unit, double feeding rollers, double cylinders for scouring and grinding (milling), automatic and hand-operated cut-in and cut-out mechanisms, gears, warning systems, etc.

The double roller mills, types LM and LP, of our manufacture, are the best products so far achieved in the field of mill units. In comparison with similar machines of other makes, which consist of component parts joined together by means of bolts or other mechanical connections, the housing of our roller mill, as emphasized above, is cast as a single body, thus ensuring long periods of service, stability and perfect parallelism of grinding cylinders.
Our roller mills contain grinding cylinders as cast in our own foundries, with approximate hardness of 500—520 Brinnel. The grinding cylinders are installed diagonally and supported by ball bearings. Accurately finished gears ensure a smooth and noiseless operation.

The wheat feeding is performed by special regulating assemblies in conjunction with two pairs of feeding rollers, also mounted on ball bearings. Those rollers distribute wheat all over the grinding cylinders in a uniform and very thin layer.

The feeding rollers are geared to the grinding cylinders so that when they are in cut-off position, the feeding is automatically stopped. The mutually parallel position of the grinding cylinders is ensured by two levers, mounted laterally, which operate by means of two exactors which are installed eccentrically in the mobile arms of the lower cylinders. These exactors terminate in a box which has a spring shock absorber which dumps out all shocks when a hard body passes through the cylinders. The distance between the cylinders is increased or decreased, with micrometric precision, by a handle, and an axle conveys motion to the two shafts of the cylinders. The cut-in and cut-out of the machine is effected by means of a simple lever. At special request, the mill unit may be equipped either with an automatic cut-out mechanism or with an automatic cut-in and cut-out assembly.

Operation

The material to be ground enters the mill unit by means of a graduated glass tube and, by gravity, falls into the feeding assembly. Equally and uniformly distributed by the feeding rollers along the whole length of the grinding cylinders, the material is ground by the cylinders and collected beneath into a special mill hopper.

Size	Cylinder Dimensions		Machine Dimensions			Driving Belt Pulley		R. P. M.		Approximate Weight			Overseas Volume m³	Cable Code
	Length mm	Diam. mm.	Length mm	Width mm	Height mm	Diam. mm	Width mm	Grooved Cylinders	Smooth Cylinders	Net kg	Gross kg	Overseas shipping weight kg		
622	600	220	1310	1599	1440	400	100	350	280	2136	2220	2300	3.10	lamar
822	800	220	1310	1839	1440	400	120	350	280	2456	2540	2630	3.70	lamdi
1022	1000	220	1310	2039	1440	400	120	350	280	2840	3000	3100	4.10	lamek
12522	1250	220	1310	2289	1440	400	120	350	280	3170	3320	3420	4.60	lamon
625	600	250	1310	1624	1440	500	110	310	250	2350	2440	2550	3.20	lamsu
825	800	250	1310	1824	1440	500	110	310	250	2700	2790	2900	3.70	lamia
1025	1000	250	1310	2024	1440	500	110	310	250	3000	3100	3220	4.00	lameo
12525	1250	250	1310	2294	1440	500	120	310	250	3250	3260	3380	4.50	lamw
15025	1500	250	1310	2544	1440	500	120	310	250	3820	3940	4050	5.30	lamux

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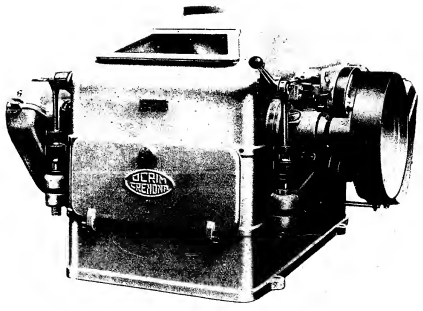

Double Roller Mill, Type LP 52

Mill Unit LP 52

In addition to the Mill Units Type LM 52, which are usually installed in industrial flour mills, our works produce also the Mill Unit Type LM 52 which is specially adapted for our „Superior" mills and plants installed on two floors only.

The Type LP 52, which retains the identical features of the design and the method of operation of Type LM 52, differs from the latter only by its smaller dimensions.

On buyer's special request, the mill unit can be equipped with an automatic cut-out device which disengages the grinding cylinders, and simultaneously brings to a rest the feeding rollers, cuts off the flow of the grain.

Size	Cylinders' Dimensions		Machine Dimensions			Driving Belt Pulley		R. P. M.		Approximate Weight			Overseas Crate Volume m³	Cable Code
	Length mm	Diam. mm	Length mm	Width mm	Height mm	Diam. mm	Width mm	Grooved Cylinders	Smooth Cylinders	Net kg	Gross kg	Overseas shipping weight kg		
422	400	220	1160	1080	950	400	80	350	280	1130	1210	1320	1.90	lasup
522	500	220	1260	1080	950	400	80	350	280	1270	1360	1470	2.05	lasmy
622	600	220	1360	1080	950	400	80	350	280	1410	1510	1620	2.20	lasox

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Automatic cut-in and cut-out device

The Roller Mill, Type LM 52, can be fitted, at special request, with a special automatic hydraulic, device either only to cut out or both to cut-in and to cut-out the operation. When a sufficient quantity of wheat has entered the mill unit, the grinding cylinders are automatically brought closer together. The operation is reversed when the supply of material is discontinued. Red and green warning lights indicate the position of the machine.

Details of the Cut-in and Cut-out Device

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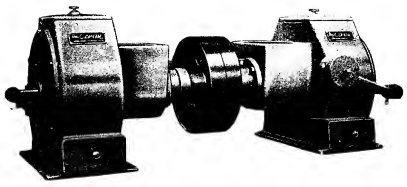


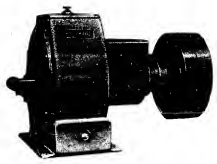
Detachers, Type MDI (coupled)

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Detacher, Type MDI

Application

The Detacher is normally used after grinding soft and hard grains, with smooth cylinders, when it is desired to obtain bread flour. His duty is to detach small particles of flour which stick together as a result of his pressure exerted by smooth cylinders during the grinding operation. This is done usually before the sifting takes place, and therefore, the detacher is instaled at the outlet opening of the mill unit.



Detacher, type MDI

Description

The machine consists of a single casting in which all movable parts are supported by ball bearings. Of the two separated discs, one is fixed, while the other is movable along the shaft which supports both discs. This feature enables the movable disc to be brought nearer to the fixed one by means of a counterweight lever. The counterweight lever acts upon the shaft and rotates, thus actuating a segment which brings nearer the movable disc.

The detacher Type MDI can be coupled in pairs with a single driving belt pulley.

Operation

After the produce has arrived into the machine, it is conveyed by means of a worm into a cavity in which the discs are installed. A special star-shaped wheel, on the inner sides of both discs, distributes the product along the perimeter of the discs which, under the pressure of incoming product, must move from one another, thus letting the flour fall after having been detached. The counterweight provides constant minimum separation of the movable discs from the fixed one, thus ensuring a constant amount of the flour in the unit. On the bottom of the machine there is an access door which serves to control the operation of the machine.

Size	Dimensions			Output kg/hour	R. P. M.	Power required C. V.	Approximate weight			Overseas Crate Volume m³	Cable Code
	Length mm	Width mm	Height mm				Net kg.	Gross kg.	Overseas shipping weight kg.		
0	502	300	323	500— 600	500	1.0	50	65	75	0.1	dista
1	521	375	400	1000—1250	400	1.5	90	120	130	0.12	disci
COUPLED DETACHERS											
0	1000	300	323	1000—1200	500	1.9	100	130	150	0.2	doblo
1	1034	375	400	2000—2500	400	2.8	180	240	260	0.24	dobwa

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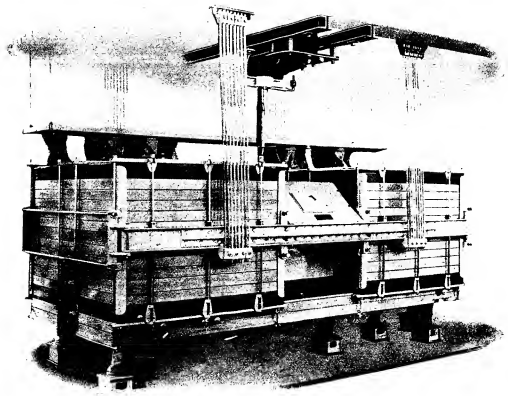


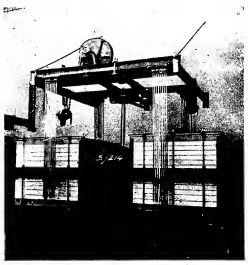
Free Swinging Plan Sifter, Type MBPG — MBPN — BS

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Free Swinging Plan Sifter, Type MBPG-MBPN-BS

Application

The Plan Sifter, together with the Mill Unit is the most important machine in a modern flour mill. Its duty is to sift and classify the grinding products.
At special request, plan sifters may be produced in various sizes and with different numbers of sifting frames.



Plan Sifter Inspection in our factories

Description

General. The Plan Sifter consists of tow box-like units which are held together by massive steel frames, each box being made of a number of independent frames (sieves) which are joined together. The plan sifter is counter-balanced for its oscillatory rotation, and suspended from a ceiling bracket by means of Indian cane sticks.

Drive. The unit is driven by a vertical oscillating shaft. On the upper end of the shaft, a belt pulley is mounted through which the unit is driven either by a special motor or by a transmission belt. At the lower end of the shaft there are eccentric vices in the jaws of which the counter-weights are gripped. These counter-weights are mounted on a trunnion, thus giving the whole unit its oscillating rotary motion. The frames (sieves) are made of limetree and horizontally arranged one above the other, and covered either with a metal or a silk mesh, the bottom being made of zinc sheet on which brush guides are fixed. The frames are joined together by vertical holders. Two groups of frames (sieves), together with respective covers, inlet openings on the top and outlet openings at the bottom, make up two units. These units are held together by a steel frame, made of reinforced U sections, and vertical stiffeners and bridges of profile steel members. The assembly and dismantling of sieves is readily carried out and takes a minimum of time. Perfect cleaning of sieves is performed by automatic brushes with accelerated motion. These brushes are conveniently marked for use either with metal or with silk meshes, and, being perfectly counter-balanced, they move smoothly along the guides fixed to the bottom of the sieves.

Ventilation. In order to fulfil its duty of constant and perfect sifting, the plan sifter is connected to the central ventilating system of the mill. Actualy, the object of the ventilation is to keep open the sieves meshes as well as to cool the product.

The power required to drive these mills is small and varies from 1/4 to 1 CV in relation to their size. This is achieved by a rational design of the main moving parts which are supported by ball bearings or are rotating on special bearings with automatic lubrication. Very strict operation checks and tests performed in our works before shipment of each of our plan sifters guarantee their perfect and trouble-free operation in service.

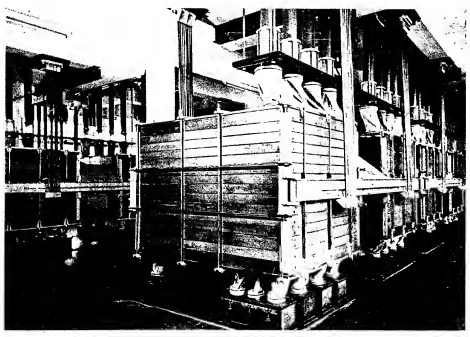
Operation

After having entered the inlet openings of the plan sifters, the flour falls into a special pan which distributes the product uniformly along the width of the first and second frame (sieve) respectively.

Starting its way across the sieve and under the influence of the conveying vanes fixed to the frame sides, the material, passing through other frames, is classified, according to size, into various products (flour, bran, etc.) Since the openings of sieve meshes are of different in sizes, accordance with the grinding diagram, it is possible to achieve, within an extremely short time, a full classification of all kinds of by-products. Perfect sifting and the highest possible efficiency prove to be to the fullest advantage of the output capacity.

Special Plan Sifters for the »Superior« Roller Mill

Our „Superior" Roller Mills are mounted on a steel base and arranged on a single floor, and they are not equipped with a manoeuvring floor such as those in industrial flour mills.
Special plan sifters of „Superior" roller mills are also equipped with a collecting duct. The design of the duct is such that the products of the same quality and/or size, arriving from various sides, are led to the same outlet opening.



General appearance of Free Swinging Plan Sifters in an industrial flour mill

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Large Plan Sifter, Type MBPG

Size	Machine Dimensions: Length mm	Width mm	Height mm	Numbers of Grooves	Plansifters: Number of sieves	Length mm	Width mm	Sifting surface m²	Brushes: Size	Quantity	Approximate Weight: Net kg	Gross kg	Overseas shipping weight kg	Overseas Crate Volume m³	Cable Code
68	3738	1945	1740	6	2 × 8	1600	1384	35.5	2	48	2000	2150	2300	12.7	giglu
88	3702	1945	1740	8	2 × 8	1600	1366	34.8	1	64	2000	2150	2300	12.5	gigur
610	3738	1945	1880	6	2 × 10	1600	1384	44.2	2	60	2200	2350	2500	13.8	gigdo
810	3702	1945	1880	8	2 × 10	1600	1366	43.5	1	80	2120	2400	2550	13.6	gigen
612	3738	1945	2020	6	2 × 12	1600	1384	53.0	2	72	2400	2550	2700	14.6	gigiv
812	3702	1945	2020	8	2 × 12	1600	1366	52.3	1	96	2450	2600	2750	14.4	gigal
814	3702	1945	2160	8	2 × 14	1600	1366	61.2	1	112	2600	2800	3000	15.5	gigky
816	3820	1920	2300	8	2 × 16	1600	2×695	70.0	1	128	2780	2990	3220	17.0	gigux

Driving Belt Pulley Diam. 345 mm, Width 100 mm, 200 RPM.

Medium Plan Sifter, Type MBPN

Size	Machine Dimensions: Length mm	Width mm	Height mm	Numbers of Grooves	Plansifters: Number of sieves	Length mm	Width mm	Sifting surface m²	Brushes: Size	Quantity	Approximate Weight: Net kg	Gross kg	Overseas shipping weight kg	Overseas Crate Volume m³	Cable Code
48	1916	1945	1740	4	2 × 8	1600	520	13.5	0	32	1150	1300	1450	6.5	norak
48	2266	1945	1740	4	2 × 8	1600	695	17.8	1	32	1250	1400	1570	7.8	norce
68	2936	1945	1740	6	2 × 8	1600	1030	26.5	1	48	1650	1850	2010	9.9	noryt
410	2736	1945	1880	4	2 × 10	1600	930	30.0	2	40	1650	1850	2010	10.0	norli
610	2936	1945	1880	6	2 × 10	1600	1030	33.0	1	60	1700	1900	2080	10.4	norso
810	2936	1945	1880	8	2 × 10	1600	1030	33.0	0	80	1700	1900	2080	10.4	norum
412	2266	1945	2020	4	2 × 12	1600	695	26.5	1	48	1500	1650	1830	9.0	norfu
412	2736	1915	2020	4	2 × 12	1600	930	35.5	2	48	1700	1900	2100	10.4	norjs
612	2416	1945	2020	6	2 × 12	1600	770	29.5	0	72	1550	1700	1880	9.5	norep
612	2936	1945	2020	6	2 × 12	1600	1030	39.5	1	72	1750	1975	2200	10.7	norwa
812	2936	1945	2020	8	2 × 12	1600	1030	39.5	0	96	1800	2025	2250	10.7	norox

Driving Belt Pulley Diam. 300 mm 200 RPM.

Plan Sifter, Type BS for the Mills »Superior«

Size	Machine Dimensions: Lenght mm	Width mm	Height mm	Numbers of Grooves	Plansifters: Number of sieves	Length mm	Width mm	Sifting surface m²	Brushes: Size	Quantity	Approximate weights: Net kg	Gross kg	Overseas shipping weight kg	Overseas Crate Volume m³	Cable Code
BS2 46s	2115	1880	1333	4	2 × 6	1600	695	13.2	1	24	690	790	900	5.3	indro
BS2 48s	2115	1880	1473	4	2 × 8	1600	695	17.6	1	32	740	850	970	5.8	indax
BS3 66s	2936	1945	1498	6	2 × 6	1600	1030	19.7	1	36	1330	1440	1560	8.5	infgu
BS3 68s	2936	1945	1698	6	2 × 8	1600	1030	26.5	1	48	1380	1490	1610	9.2	intex
BS4 88s	3702	1945	1638	8	2 × 8	1600	1366	34.8	1	64	1710	1830	1960	11.8	inenu
BS4 810s	372	1945	1778	8	2 × 10	1600	1366	43.5	1	80	1790	1910	2050	12.7	inexx

Driving Belt Pulley for Type BS2: Diam 300 mm, Width 70 mm, RPM 200.
Driving Belt Pulley for Type BS3: Diam 350 mm; Width 90 mm, RPM 200.
Driving Belt Pulley for Type BS4: Diam 345 mm, Width 100 mm, RPM 200

Heights shown refer to the height from the floor to the top of the machine inlet board.
Weights and volumes refer to the machine complete with control unit inlet board and outlet boxes.

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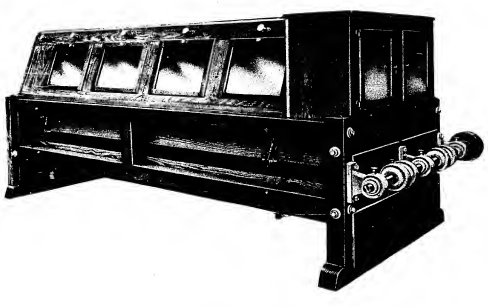

Double Purifier, Type MPD

UNDER LICENCE
CRIM
CREMONA (ITALIA)

Double Purifier, Type MPD and MPQ

Application

The Purifier is used in flour mills for cleaning and classifying the middlings.

Description

The machine consists of a double row of sieves (Type MPD). Four-row purifiers (Type MPQ) are also produced. The sieves are inter-connected and mutually independent, and equipped with brushes for an automatic cleaning of the sifting mesh. Two vibrating transporters-collectors are installed beneath the sieves with outlets for the discharge of products from the machine. The conveying angle is adjustable by means of special steel levers with a double micrometric graduation supported by ball bearings. All this is installed in a beech-wood frame, with ventilation equipment. A shaft with a double eccentric, mounted on ball bearings, actuates the sieve and the vibrating transporters-collectors. Special shut-off valves control the amount of air needed for the ventilation of each sieve. Double purifiers are specially used in mills grinding soft kinds of wheat, whereas the quadruple purifiers are used in mills grinding hard kinds of wheat, for the purpose of achieving a better cleaning and classifying of middlings.
For lower quality middlings, we recommend the quadruple purifiers.

Operation

The product falls, through a hopper, forming a thin layer over the whole length of a silk mesh, and continues to slide down the silk mesh. The heavier particles fall through the silk into the conveying channels, while the lighter remnants slide on the silk and, exposed to the influence of ventilating air, pass through the whole machine and are discharged from it.

The central ventilating system lifts the lighter parts of the products and enables them to settle down in the air chambers, since they cannot be eliminated on the sieves themselves because their size is equal to that of flour particles.

Size	Dimensions			Number of Sieves	Sieves' Dimensions	RPM	Power required CV	Output kg/hour	Approximate Weight			Overseas Case Volume m³	Cable Code
	Length mm	Width mm	Height mm						Net kg	Gross kg	Overseas shipping weight kg.		
MPD 35	3162	1550	1390	2 × 4	350 × 590	500	0.7	550— 800	630	720	850	9.4	pusca
MPD 45	3162	1750	1390	2 × 4	450 × 590	500	0.8	750—1100	735	825	960	10.4	pusil
MPQ 25	2675	1150	1525	4 × 4	250 × 485	600	0.8	*400— 500	730	820	950	6.7	puswe
MPQ 35	3165	1550	2000	4 × 4	350 × 590	500	1.5	*550— 800	1400	1520	1650	13.0	pusby
MPQ 45	3165	1750	2000	4 × 4	450 × 590	500	1.7	*750—1100	1550	1670	1800	14.4	pusax

(*) Quadruple Scourer replacing two Double Scourers (for soft grains) doubles the output per hour.

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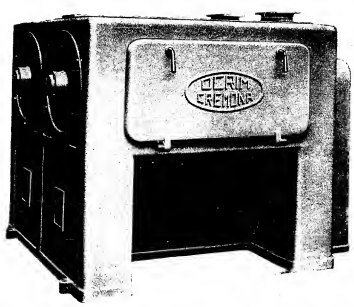
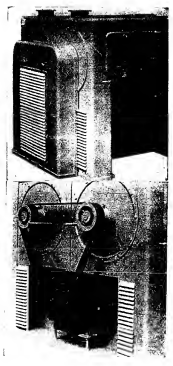


Bran Finisher, Type MFCARD

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Bran Finisher, Type MFCAR and MFCARD



Application

The Bran Finisher of our manufacture successfully replaces the brushing machines of an older type. The machine removes the remaining flour particles from the bran husks without any damage whatsoever to the bran itself. The result is a white product which is sifted easily and is of a very high quality. The machine is usually installed between the final scourers, thus ensuring the best and the most economical finishing.

Description

The working principle of the machine is entirely different from that of the old type branbrushing machines. Special steel hammers are installed on a metal drum which rotates at a high speed. The machine, which is entirely made of steel, consists of one or two drums. The rotating parts are supported by ball bearings, thus ensuring a great number of revolutions per minute with the highest possible efficiency. Therefore, a smaller machine, with a smaller number of revolutions per minute, produces the same desired results. The machine is also equipped with a ventilating connection. This type of a bran finisher is massive, very strong and does not require any exceptional maintenance care.

Operation

The hammers, mounted on to the drum (rotor) at definite angles actuate the bran particles, and these, moving forward and thus rubbing themselves against one another, let down the flour into a pan which is enclosed in the drum. Thus, the material, after having entered the machine and covered a distance of not more than two feet, goes out, flour-free and of a reddish colour, while the flour enters a plan sifter through a perforated steel sheet.

Size	Drum Dimensions		Output per hour		R.P.M.	Power required C. V.	Approximate Weight			Overall Volume m³	Cable Code
	Diameter mm	Lenght mm	Bran kg.	Flour kg.			Net kg.	Gross kg.	Overseas shipping weight kg.		
3570	350	700	110—155	45—65	1200	1.5—2	230	280	330	0.9	cruuu
3060	300	600	75*—110	35*—45	1200	2.5—3.5	340	385	430	1.1	cruyl
3570	350	700	110—155	45—65	1200	3—4	430	485	535	1.3	cruwe
5080	500	800	250—310	110—145	1200	4.5—5.5	850	915	975	2.5	cruxa

(*) When double drum machine is used either for the bran only, or for the fine bran only, the coresponding output per hour is doubled

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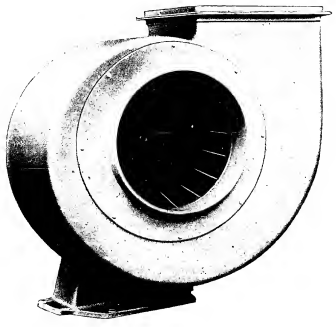


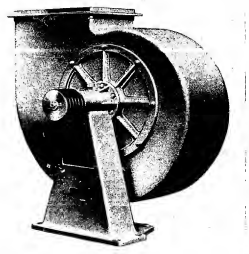
Low Pressure Centrifugal Fan, Type MV

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Low-Pressure Centrifugal Fan, Type MV

Application

The Centrifugal Fan is used to generate the air stream, to remove dust in the cleaning-section of the mill, to move and classify products, as well as to cool both the products and the machine, in the mill itself.

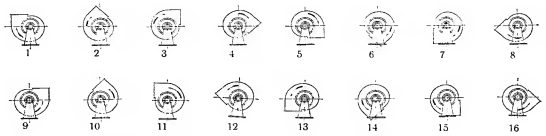


Description

The low-pressure centrifugal fan consists of a casting which forms a base and a housing made of steel sheet, and in it there is a rotor with vanes of corresponding sizes. With a minimum of power, the rotor rotates at a high speed and creates a very powerful air stream. The vaned rotor is perfectly counterbalanced, both statically and dynamically. It is installed on two strong brackets, equipped with ball bearings which ensure a smooth and noiseless operation. The fan has an adjustable housing, and also has a left-hand or a right-hand air outlet as shown on the accompanying figure.

Size	Machine Dimensions			Entrance Port Diameter mm	R.P.M.	Air Capacity cub. met. per. min.	Pressure in mm. H_2O	Approximate Weight			Overseas Crate Volume m^3	Cable Code
	Length mm.	Width mm.	Height mm.					Net kg.	Gross kg.	Overseas shipping weight kg.		
25	565	467	620	250	2100	53.5	75	54	80	95	0.40	venal
35	765	590	770	350	1400	102.0	75	105	135	160	0.73	venbe
45	980	720	1030	450	1120	170.0	75	152	190	220	1.35	venik
55	1185	790	1260	550	1000	266.0	75	226	270	315	2.00	venpu
65	1420	984	1410	650	800	370.0	75	310	365	420	3.10	venox

By changing pressure to 50 or to 100 mm. of water the R.P.M. and air stream intensity are either decreased or increased respectively.



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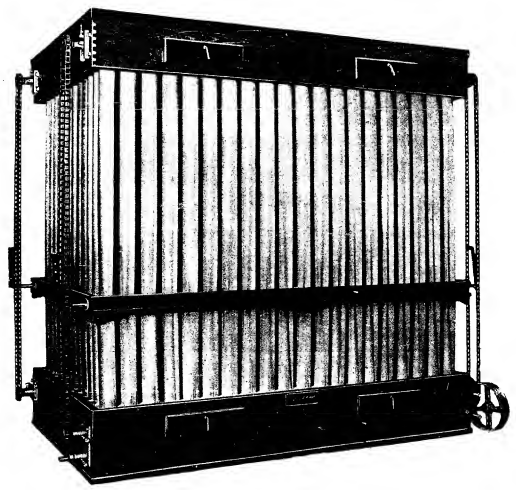

Multitubular Suction Filter, Type MFP

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Multitubular Suction Filter, Type MFP

Application

The object of the Multitubular Suction Filter is to keep the flour dust away from the powerful air stream which is needed for ventilation in the grize purifier.

The filter is also used to clean the air in the pneumatic conveying system, since even the air which has been almost completely freed from by-products in the cyclones, still carries with it tiny particles of flour.

Description

The filter consits of two wooden boxes, the upper one and the lower one, which are connected by linen tubes through which the air circulates. The number of tubes depends upon the volume of the air to be filtered. The tubes are cleaned by means of a frame which, sliding up and down, removes flour from the linen tubes. The frame is driven by a Ewart chain.

There is a scraper within the lower box which is operated by the chain, while on the side there is a worm which collects and removes automatically dust from the flour. With their rational and massive design, our filters ensure perfect operation, use minimum driving power, and require no particular care or maintenance.

Operation

The dust-laden air, driven by a fan in the upper box, enters into the linen tubes and goes out through the tiny holes of the linen completely free of dust. On the other hand, the dust which has remained on the inside walls of the tubes, is removed by the above-mentioned movable frames, and falls into the lower box, where it is collected by the scraper, and discharged from the machine by the conveying worm.

Size	Number of Tubes			Filtering Surface m²	Dimensions			R.P.M.	Approximate Weight			Overseas Crate Volume m³	Cable Code
	Length	Width	Total		Length mm	Width mm	Height mm		Net kg.	Gross kg.	Overseas shipping weight kg.		
68	8	6	48	32	1590	965	3000	50	280	330	420	2.3	filak
88	8	8	64	43	1590	1225	3000	50	350	400	500	2.8	filbe
810	10	8	80	54	1850	1225	3000	50	380	430	550	3.4	filim
1010	10	10	100	68	1850	1485	3000	50	400	480	600	4.0	filwo
1012	12	10	120	80	2120	1485	3000	50	450	530	650	4.4	filur
1014	14	10	140	95	2370	1485	3000	50	490	580	710	5.0	filsa
1214	14	12	168	110	2370	1745	3000	50	530	620	770	5.7	filee
1215	15	12	180	120	2500	1745	3000	50	550	650	800	6.0	filpy
1020	20	10	200	135	3150	1485	3000	50	600	700	875	7.0	filon
1220	20	12	240	160	3150	1745	3000	50	650	750	960	7.7	filux

Tubes are of 100 mm. Diameter, and 2.000 mm. long.

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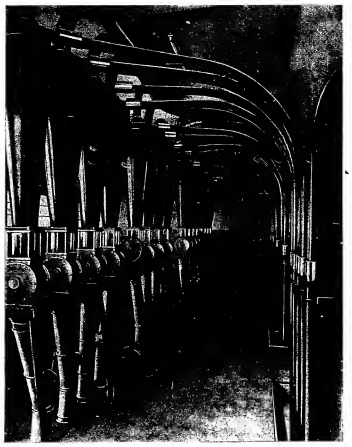


Medium Pressure Pneumatic Conveyors For Products of The Grinding Process

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Pneumatic Conveyor

The most important novelty in respect of wheat-grinding technique and ground products is the use of a pneumatic conveying system, that is a system of air streams for the purpose of transporting wheat, or ground products, in various phases of the process.

The new system, which we have developed thoroughly, is so successful that it enables us to claim the following advantages of the transportation by means of pneumatic conveyors over those of the elevator system.

Mechanical. The pneumatic conveying system eliminates the need for clumsy elevators, in large crates, belts, straps, buckets, etc., which wear out quickly and the maintenance of which involves considerable difficulties. The use of pneumatic conveyors speeds up the process itself, and also saves time needed for transportation.

Hygienic. The use of the new system precludes parasites and cobwebs. Thanks to the hermetically closed units and their connections, there is no dust, and the mills are, therefore, absolutely clean.

Technological. Our medium-pressure pneumatic conveying system, as compared with the high-pressure pneumatic system, uses the maximum percentage of air, thus achieving the best possible mixture of air and products during transportation. The flour, produced in this way, quickly reaches full ripeness needed for bread-making, displaying a quicker and more powerful effervescence in the process of fermentation.

Economic. Apart from transporting wheat during the grinding process, the new system also lowers the temperature of the wheat, and thus eliminates the need for special ventilating installations; in view of its smaller size, considerable savings are possible in respect of the size of the building in which it is accommodated, and also a fewer number of floors of the mill. The assembly of the system is more economical and speedier, and maintenance costs are considerably lower.

Safety. The new system reduces the danger of fire and accidents to a minimum (insurance companies apply lower rates when insuring mills equipped with our pneumatic conveyors).

Pneumatic conveyors used in the mill cleaning-sections differ from those in the grinding section only in the design of valves, while other parts operate on the same principle and are of the same design. Our pneumatic conveyors consist of the following component parts:

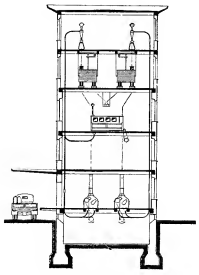
Centrifugal fan,
Seamless steel pipes with control windows,
Cyclone for separating air from ground products,
Collecting ducts,
Connecting tube of the fan collector, and
Filter with air chamber and supercyclone.

Special Characteristics Of The Pneumatic Conveyor

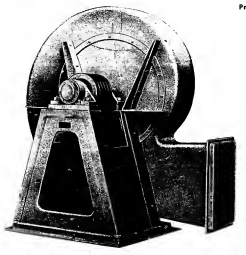
As compared with other high-pressure pneumatic conveyors, our pneumatic conveyor is a medium-pressure one. This enables a better mixture of ground products with the air, and, consequently, a better and more rational cooling, better ionization, and reduces to a minimum the danger of the clogging of tubes, even in the case of lower power voltages. The system operates smoothly, control and adjustment facilities being very simple and easy to handle.

Pneumotic Conveyors in mill cleaning section

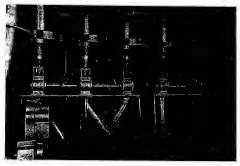
In the grain cleaning section, our pneumatic conveying system, in view of the considerable quantity of air, enables perfect separation of grain from dust and other light particles (this is achieved by special double cyclones). The grain enters the mill units completely free from dust, and as a result there is a minimum percentage of ash in the flour.



Pneumatic Conveyor (cross section)



Centrifugal fan of medium-pressure pneumatic conveyors

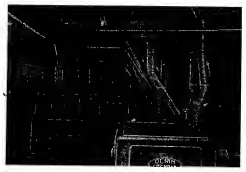


Pneumatic conveyor in the cleaning section with double cyclones

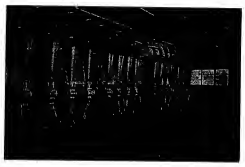
Roller millroom with tubes through which pneumatic transport is carried out

Tube bends — parts of pneumatic system in basement beneath roller mills

Plan sifters with direct drive

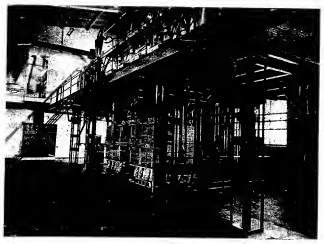


Purifiers with a double bran finisher in front of them



Pneumatic conveyor for ground products

Our medium pressure pneumatic conveyors have the same features of design and operation as our automatic »Superior« mills



Set of two Mills Type »Superior 6C« with an output soft grain 150 mc.24 hour each Mill

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Double Flour-Mixer, Type MMF

UNDER LICENCE
OCRIM
ORSENIGA (ITALIA)

Double Flour-Mixer, Type MMF

Application

The Flour Mixer is used for mixing and equalizing the different brands of flour obtained simultaneously during the milling process, or for mixing other kinds of flour in order to enable the production of one kind of flour, regardless of the kinds just obtained by the grinding process.

Description

The mixer is divided into two parts and consists of a wooden case reinforced by a strong frame made of steamed beech timber.

On the top part of the wooden box there is an actuator, with vanes fixed on the shaft, which drives flour towards the outlet openings. Each compartment is provided with its individual drive by means of a sprocket and chain, with a cut-in and cut-out assembly.

Beneath the actuator, there are two valves each of them controlled by its own steel lever. Through the openings of these valves, flour falls to the lower box, wherefrom a conveying worm transports it to the elevator. Two windows are provided for inspection of the operation of the machine.

Operation

Flour which enters the machine is taken up by the mixer and falls through valve openings, adjustable by levers, into a conveying worm which brings it back to the mixer. Thus, by continuing its travel in and out of the machine, the product becomes fully homogeneous.

Size	Machine Dimensions			Agitating Drum Dimensions		RPM	Power required CV	Approximate Weight			Overseas Crate Volume m^3	Cable Code
	Length mm	Width mm	Height mm	Diameter mm	Length mm			Net kg	Gross kg	Overseas shipping weight kg		
* 310	2155	720	990	300	1000	70	1.5	255	330	370	2.2	fartj
320	2810	720	990	300	2000	70	2.5	410	500	560	2.8	faral
330	3810	720	990	300	3000	70	3.5	660	770	850	3.7	faryn
4830	4000	800	1090	480	3000	70	4.0	700	830	910	4.0	farox

(*) Simple Mixer with a single compartment.

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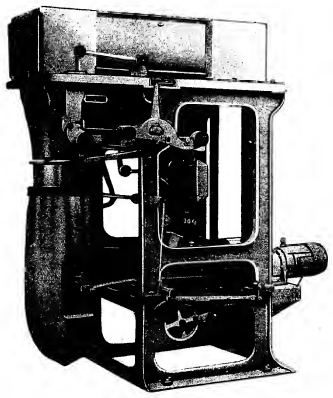


Sacks Filling Balance, Type MBI

UNDER LICENCE
OCRIM
CREMONA (ITALIA)

Sacks Filling Balance, Type MBI

Application

The Automatic Sack Filling Balance is remarkable among similar balances not only by its size, operational speed and filling capacity, but also by its accuracy and ease of handling. By connecting this balance with the flour mixer it is possible to fill into sacks flour, obtained from a 24-hour continuous mill production, in a very short period of time.

Description

The balance consists of a single massive cast frame on which are installed flour feeding assembly, weighing mechanism, sackfilling tube, with a shut-off valve, and sack-closing assembly, which can be adjusted to operate with 10 to 35 strokes. The machine can be driven either directly or by a driving belt. The balance is also equipped with a totalizing counter.

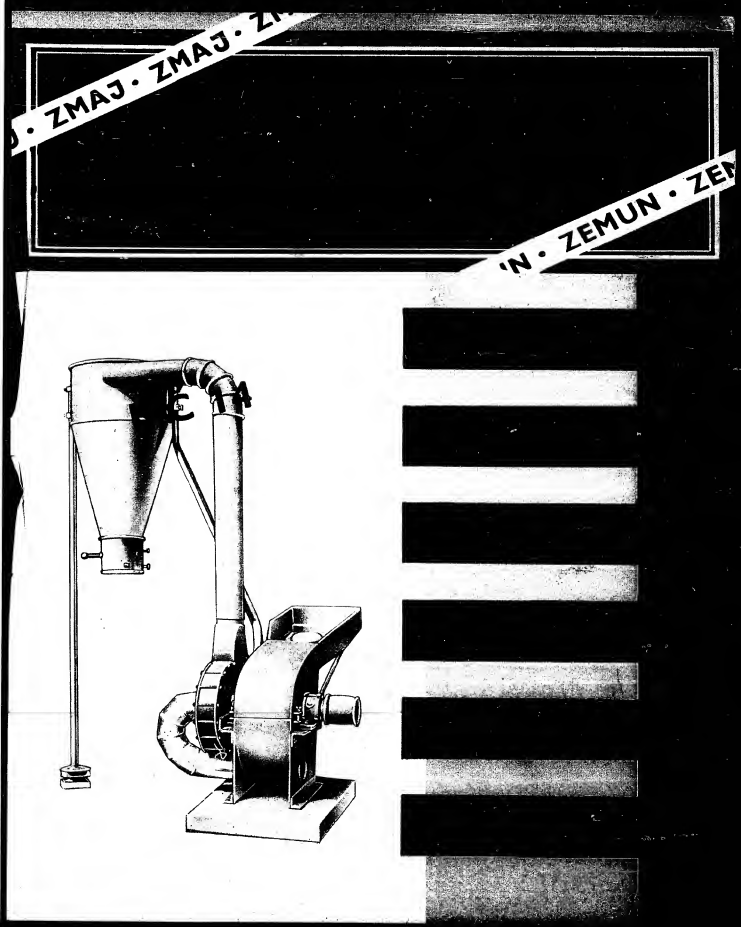
Operation

An endless worm brings material to be weighed to the balance. In order to fill sacks with a desired weight, the balance is automatically cut-in, and when the weight desired is obtained, the balance is automatically cut-out The balance is designed for sacks of from 50 to 150 kgs (110 lbs. to 330 lbs.), with an output capacity of 120 sacks per hour in relation to the nature and conditions of products with which the sacks are to be filled.

Size	Dimensions			Number of 50—100 kg Sacks per hour.	RPM	Power required CV	Approximate weight			Overseas Crate Volume m³	Cable Code
	Length mm	Width mm	Height mm				Net kg	Gross kg	Overseas shipping weight kg		
MBI	1590	1100	2550	120	80	1.8	1500	1850	2000	6.5	insac

(*) When equipped with a reduction gear, the length is 2.190 mm.

FIGURES AND DATA ARE AT THE DISCRETION OF THE MANUFACTURER



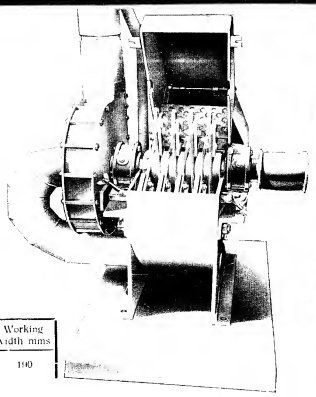
MLIN ČEKIĆAR

The working parts — hammers (32 in total) are well fastened to four crossbeams fixed to a very strong steel driving axle.

The hammer-mill has a pulley securely fixed to the driving shaft which transmits the driving force from the motor.

The grain size of the milled material depends on the degree of resistance offered by the sieves. The sieves are changed according to the material to be milled and depending on the desired grain size.

For good performance the proper mounting of the hammer-mill is extremely important. The mill has to be mounted on level ground and well secured to its base. The distance between the driving pulley on the motor and the driven pulley on the mill should not be less than 6 metres.



TECHNICAL DATA:

Weight kilos	Speed r. p. m	Capacity kilo of grain	Required power HP	Drum dia. mms.	Working width mms
1.0	3100	500	6 – 7	512	190

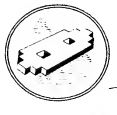
SPARE PARTS:

SIEVES

made with perforations of 3, 5, 7, 13 and 16 mm dia.

BALL-BEARINGS

SKF, catalogue No. 1307.

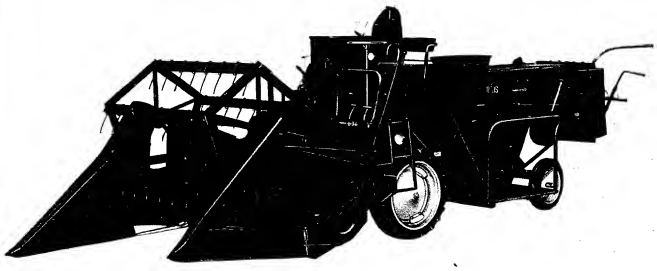


HAMMERS

made of hardened steel.

ACCESSORIES DELIVERED:

— sieves with perforations of 3, 5, 7, 13 and 16 mm dia.
— two spare hammers
— Tecalemit lubricating gun, lubricating nipple and a wrench for hexagonal nuts.



Samohodni žitni kombajn „ZMAJ" No. 630

radnog zahvata 1,6 metara proizvodi se u velikim serijama i namenjen je u prvom redu manjim i srednjim gazdinstvima. Time je i ovim gazdinstvima omogućeno da koriste neosporne prednosti kombajna. Tamo gde je doskora bilo potrebno mnogo radne snage da bi se obavio najvažniji posao — ubiranje plodova — žetva, dovoljan je danas jedan čovek sa jednim pomoćnikom. Žetva, ne zavisi više od skupog ručnog rada, ne zavisi ili zavisi u vrlo maloj meri od vremena, a oslobadja vam traktor da bez prekida i dalje obavljate ostale radove za vreme žetve — prevoz ili neke druge poljske radove.

Kao pogonska mašina na kombajnu upotrebljen je Volkswagen motor, što dokazuje koliko je lako kretanje kombajna i obavljanje radova oko vršidbe. ***Čak ni u uslovima naročito teške žetve*** *1954 godine, nije došla ni u najmanju sumnju njegova sposobnost za obuvljanje toga posla.*

Potpuno poleglo i znmrženo žito žnjelo se dosada uvek uz velike gubitke. Samohodni žitni kombajn „Zmaj" sa svojom žetelicom — hederom — koji se može podešavati po visini, sa razdelilvačima useva i pužem za uvlačenje, izlazi na kraj i sa jako poleglim žitom.

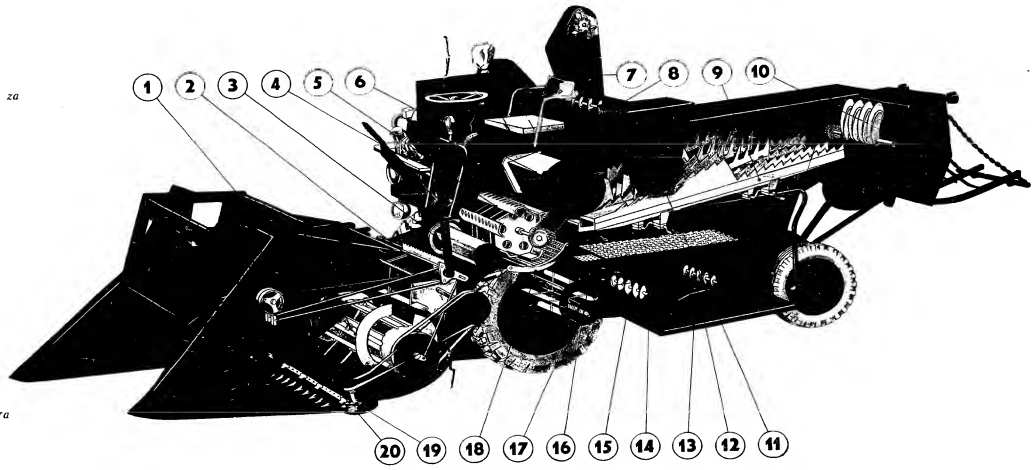
I za najmanje parcele, široke svega dva do tri otkosa, često zasadjene voćkama, „Zmaj"-ev samohodni žitni kombajn je danas idealni pomoćnik pri žetvi. Za kratko vreme, brže no što je dosada bila samo požnjevena, letina je potpuno sredjena — požnjevena i ovršena.

Na nepoleglom usevu pravo je zadovoljstvo žeti samohodnim žitnim kombajnom „Zmaj". Tamo gde su doskora bile potrebne mnoge ruke i radne operacije, dovoljan je danas jedan odrastao čovek sa jednim pomoćnikom, i već iste večeri žito je spremljeno na sigurnom mestu u krugu gazdinstva.

SAMOHODNI ŽITNI KOMBAJN „ZMAJ“ No. 630

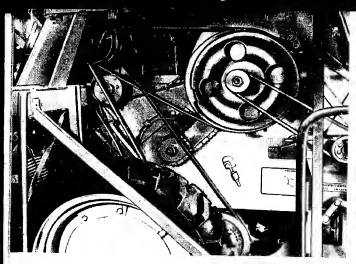
1. *Puž za uvlačenje*
2. *Prednji transportni biter*
3. *Zadnji biter (hranilac)*
4. *Motor*
5. *Bubanj sa šinama za vršidbu*
6. *Odbojni biter*
7. *Elevator za zrno*
8. *Transportni puž za cilindrično sito za sortiranje ili mali bunker*
9. *Slamotres*
10. *Ugradjena presa za slamu tipa „Raussendorf“*

Žito, požnjeveno pomoću hedera (žetelice) na željenoj visini, sprovodi se ravnomerno pomoću puža za uvlačenje žita i predaje prednjem transportnom biteru. Odavde žito ide preko zadnjeg bitera (hranioca) i ubacuje se izmedju bubnja aparata za vršidbu, koji ima 6 udarnih šina, i podbubnja (korpe) koji se može podešavati. Kroz podbubanj se izdvoji skoro 90% zrna iz ovršene mase. Intenzivnom vršidbom slama se jako izgnječi (visoka moć uvlačenja, lako stvaranje pleve) i pomoću odbojnog bitera otprema na tri sekcije slamotresa koji se pokreće pomoću dva kolenasta vratila. Slama se pomoću prese za slamu presuje u bale koje preko vodjica ispadaju sa zadnje strane kombajna i odbacuju se ustranu. Bale su jednom uvezane i pogodne za rukovanje.



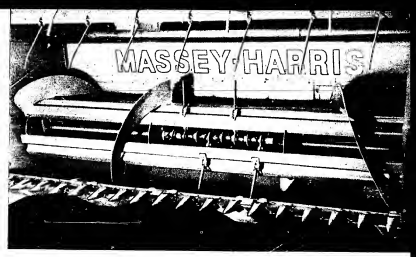
11. *Otvor za prikapljanje zrna*
12. *Puž za neovršene klasove*
13. *Platforma za pomoćnika kombajnera i prihvatanje vreća*
14. *Greplovo sito*
15. *Puž za zrno*
16. *Donje sito*
17. *Ventilator*
18. *Podbubanj (korpa)*
19. *Pogon kose*
20. *Pogon motovila*

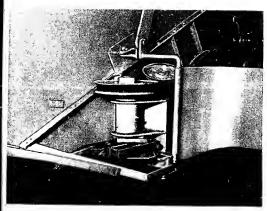
Prvo čišćenje nalazi se ispod slamotresa i lobija potrebnu količinu vazduha od ventilatora postavljenog ispod prednjeg kraja slamotresa. Uredjaj za brzo podešavanje omogućuje istovremeno podešavanje gornjeg i donjeg sita kao i njihovu laku izmenu bez upotrebe alata. Zrno ovršeno iz klasa dospeva kroz podbubanj, odnosno slamotres, na jedan izbušeni lim koji preuzima njegovo dalje transportovanje na čišćenje. Neovršeni delovi klasova dospevaju sa sita do puža za neovršene klasove, a pomoću elevatora neovršenih klasova ponovo se ubacuju izmedju bubnja i odbojnog bitera. Sva zrna koja prodju kroz drugo sito otpremaju se pomoću puža i elevatora za zrno u gornji deo mašine, dospevaju u cilindrično sito za sortiranje i najzad se preko malog bunkera prikupljaju u vreće.



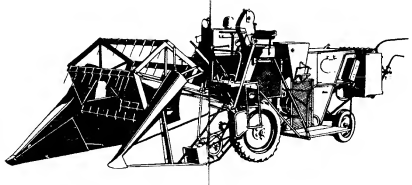
Pogon vršalice kao i kretanje kombajna ostvaruje se sa iste osovine: pogon vršalice preko ravnog kaiša čiji pritezač služi istovremeno i kao spojnica; pogon za kretanje kombajna — preko širokog klinastog kaišnika — prenosnika za kontinuelnu promenu brzine, koji se može podešavati. Na taj način i pri promenljivoj brzini kretanja kombajna, radni delovi vršalice zadržavaju stalan broj obrta.

Puž za uvlačenje, sa zavojima postavljenim jedan prema drugom, nosi požnjeveno žito ka otvoru kanala koji leži iza srednjeg dela puža. Nasuprot dosada upotrebljavanim puževima, kod kombajna Nr. 630 upotrebljena je otvorena konstrukcija koja se sastoji iz profilisanih letvi i nekoliko nosećih kružnih ploča, pri čemu je montaža i staranje znatno olakšano.

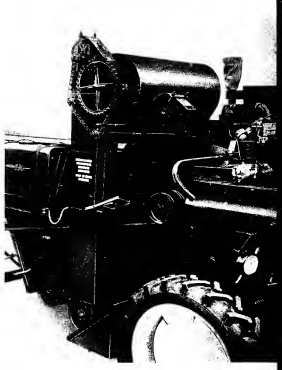


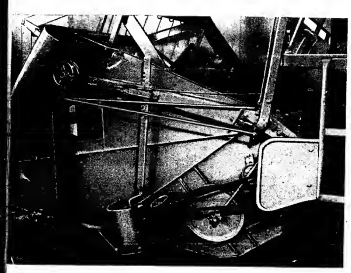


Novi uprošćeni pogon kose radi bez ekscentrične — preko krivaje čiji donji kraj klizi u žljebu šine na kosi (kulisa).

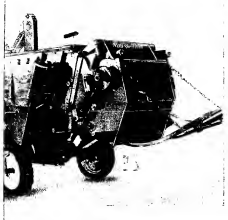


Prikupljanje zrna iz cilindričnog sita za sortiranje ili malog bunkera vrši se na postolju (platformi) za prihvatanje vreća sa kojeg se vreće ravnomerno spuštaju na stranište. Ma kako da je dragoceno stvarno vreme vršidbe, u cilju da se smanje pritisci na tlo, kod samohodnog kombajna „Zmaj" namerno je izostavljena daska za prikupljanje vreća i pretovar u prikolice.

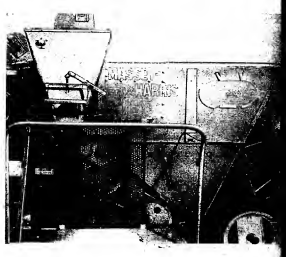




Motovilo dobija pogon od krivaje koja se nalazi na osovini puža za uvlačenje. Ova deluje preko jedne ručice na dve poluge koje naizmenično pomoću pantljika za kočenje obrću motovilo. Kontinuelna (bezudarna) promena broja obrta motovila omogućena je pomoću vodjice u poluzi na kojoj se osim toga nalazi osiguravajuća spojnica za slučaj preopterećenja.



Presa za slamu je lake čelične konstrukcije i presuje slamu u bale koje su jednom uvezane, čvrste i lake za rukovanje. Bale se preko dvaju kliznih šina odbacuju ustranu.



SAMOHODNI ŽITNI KOMBAJN »ZMAJ« No. 630

PO LICENCI MASSEY - HARRIS

Samohodni žitni kombajn „Zmaj" Nr. 630 ističe se svojom prostom konstrukcijom. Naročito su vredne pažnje sledeće osobine:

Niska gradnja, nizak položaj težišta i podesna raspodela težine. Otvoreni prednji puž, što dovodi do uštede u materijalu i lakše izmene i podešavanja.

Uprošćeni neposredni pogon kose bez cigančice, čime je smanjena opasnost od lomljenja.

Pogon motovila bez kaiša i lanaca, usled čega je smanjena opasnost od namotavanja.

Uredjaj za brzo podešavanje sita omogućuje lako regulisanje u različitim uslovima žetve.

Prenosnik za kontinuelno regulisanje brzine kretanja, što ne dovodi do pada broja obrta motora, kao i radne brzine kose i mehanizama za rad vršalice.

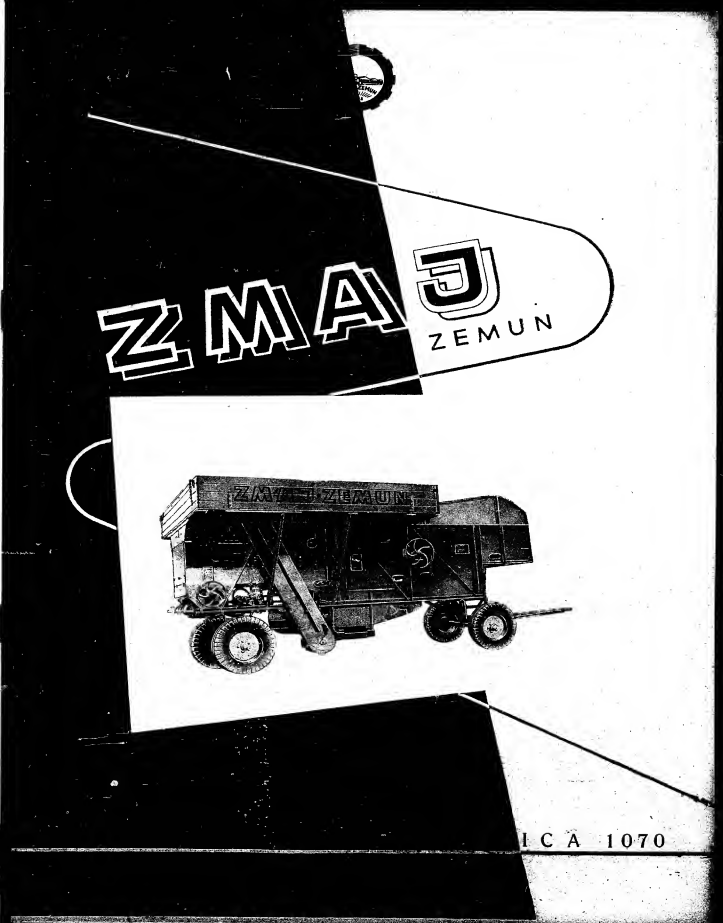
Samohodni žitni kombajn „Zmaj" prvi je u svetu uverljivo dokazao na potpuno poleglim usevima 1954 godine šta može da učini pod tim nezgodnim okolnostima.

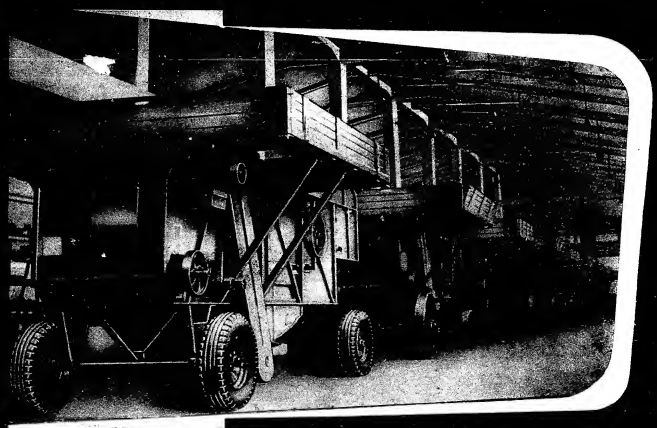
TEHNIČKI PODACI

Heder (prijemni sto):	Širina zahvata	1,6 metara
	Visina košenja	5—60 cm
	Regulisanje visine košenja — ručno sa oprugama za uravnoteženje.	
Brzina kose	oko 420 duplih hodova u minutu	
Bubanj:	širina	600 mm
	prečnik	450 mm
	broj obrta	490 — 1.300 o/min.
	broj šina	6
Podbubanj:	broj šina	5
Slamotres:	broj sekcija	3
	broj obrta osovine slamotresa 180 — 200 o/min.	
Uredjaj za prikupljanje zrna u vreće	cilindrično sito za sortiranje mali bunker za zrno	
Motor	VW — industriski	
Brzina	kontinuelni prenos tri brzine napred, jedna brzina nazad, 1,5 — 16,5 km/h.	
Potrošnja goriva	oko 4—4,5 litra na čas	
Rezervoar za gorivo kapaciteta	50 litara	
Točkovi	7—24 i 4,00 x 15	
Dužina pri radu (bez prese)	oko 5,8 metara sa presom oko 6,6 metara (bez kliza za bale)	
Širina pri radu	oko 2,25 metara	
Visina pri radu	oko 2,34 metara	
Težina	bez prese oko 1.375 kg sa presom oko 1.530 kg razdeljivač po 13 kg tegovi zadnjeg točka po 39 kg	

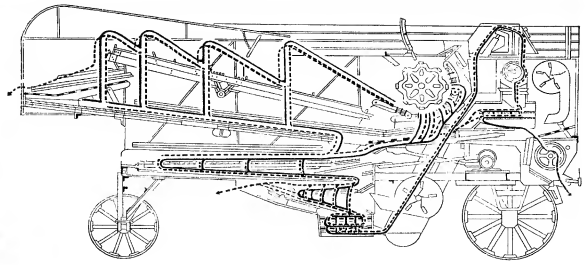
POSEBNA OPREMA

Presa za slamu koja se može ugraditi za jednostruko vezivanje, podizač poleglih klasova, osvetljenje, cilindrično sito za sortiranje, dva mesta za prikupljanje zrna u vreće





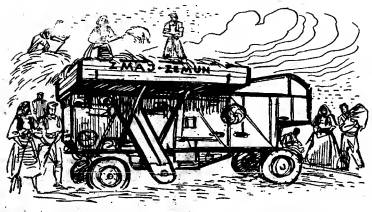
ZMAJ
ZEMUN
JUGOSLAVIJA
Prodajno odeljenje: telefon 37-055



ZRNO
PLEVA
DUGA SLAMA
KRATKA SLAMA

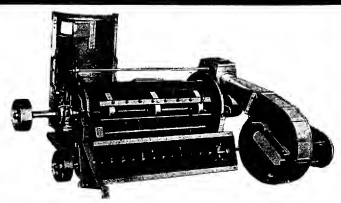
JUGOSLOVENSKA VRŠALICA 1070

Savremena poljoprivreda zahteva mašine kakva je »Zmaj«-eva vršalica J. V. 1070, koja je izrađena od prvorazrednog materijala, čelične konstrukcije sa metalnom oplatom. Na svim osovinama ležišta su kuglična sa tekalemit mazalicama. Ovakva izrada garantuje i povećava dugotrajnost u radu, jer su isključeni uticaj vlažnosti vazduha i kolebanje temperature. Vrlo je laka za rad, kontrolu vršaja, kao i za podmazivanje i čišćenje. Normalno je opremljena i sposobna za vršidbu strnih žita. Sa malim izmenama — promenama sita ili šina na bubnju može sa uspehom obavljati vršidbu krupno semenih leguminoznih kultura i ostalih sitno semenih, kao što su: proso, repica, muhar, heljda itd. Zahvaljujući svojim konstrukcionim osobinama vršalica J. V. 1070 postiže veliki radni učinak i izvrsnu kakvoću. Sigurna je u pogonu sa velikim radnim površinama. Po svojim dimenzijama, težini i kapacitetu prilagođena je kako za manja, tako i za veća poljoprivredna gazdinstva. Dovoljno je stabilna i snabdevena sa kočnicama, tako da je pogodna za ravnice i krajeve sa talasastim terenom. Vršalica J. V. 1070 se brzo i praktično prilagođava vršidbi lucerke i pirinča — montiranjem posebnih uređaja, kao i rada u agregatu sa gnječilicom i sečkom za slamu, čime se povećava njena univerzalnost i najšira primena za vršidbu.



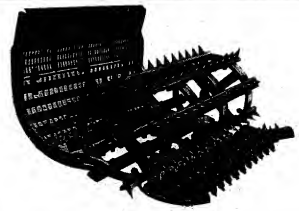
UREĐAJ ZA VRŠAJ DETELINE

U dopunski uređaj za vršaj deteline spada dopunski bubanj, beskrajna spirala se ekshaustorom i ventilatorom za odvajanje mahuna u dopunski bubanj. Dopunski bubanj lako se montira uz vršalicu J. V. 1070 i ima zadatak da omlaćene mahune u glavnom bubnju odvoji od semena.



UREĐAJ ZA VRŠAJ PIRINČA

Za krajeve gde se gaji pirinač sa ćopunskim uređajem za vršaj pirinča može se sa lakoćom i malim izmenama sa vršalicom J. V. 1070 obavljati vršaj i ovog useva. Glavni bubanj sa šinama zamenjuje se jednim zupčastim bubnjem i korpom.

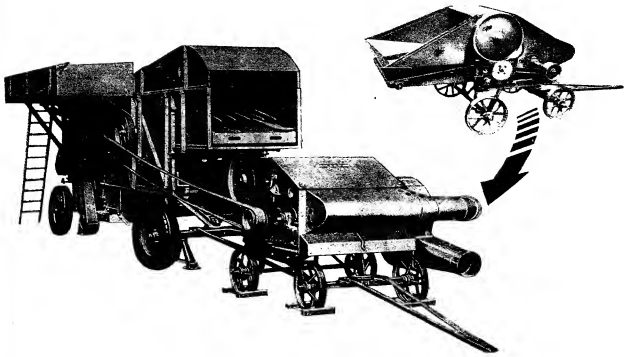


TEHNIČKI PODACI:

Glavne mere u cm.			Težina u kg.	BUBANJ				Učinak na sat	Pogonska snaga
Dužina	Širina	Visina		Prečnik	Dužina	Br. šina	Obrt. u min.		
625	340	300	3.000	57 cm.	107 cm.	8	1070	18-20 mtc	20 KS

SEČKA I GNJEČILICA ZA SLAMU

Konstrukcijom ove gnječilice upotpunjen je asortiman naših uređaja i sprava koje se montiraju uz našu vršalicu J. V. 1070. Gnječilica može da radi kao posebna mašina i u agregatu sa vršalicom J. V. 1070. Ovom mašinom se istovremeno obavlja seckanje i gnječenje slame, sena i kukuruzovine. Veliki privredni značaj ovakve mehaničke pripreme je očevidan, jer se isitnjena hrana bolje iskorišćava u organizmu životinja. Gnječilicom se postiže racionalna upotreba raznih vrsta kabaste hrane, koja inače ne bi došla u obzir za ishranu stoke. Namenjena je prvenstveno upotrebi u agregatu sa vršalicom J. V. 1070. Sa slamotresa vršalice slama pada direktno na beskrajno platno sečke, koja ju odvodi među dva čelična valjka postavljena jedan iznad drugog, koji obavljaju gnječenje slame i raspoređuju je radi ravnomernog odlaska na dalji proces obrade — seckanje. Zgnječenu slamu zahvataju noževi bubnja i udarcima o noževe podbubnja obavljaju seckanje slame. Na osovini bubnja postavljen je ventilator eksaustora, koji usisava isitnjeni materijal kroz odvodnu cev napolje. Gnječilica je čelične konstrukcije sa lemenim stranicama postavljena na točkovima, lako pokretna i stabilna. Kada je u agregatu sa vršalicom pogon se prenosi preko dopunske remenice postavljene na osovini bubnja sa desne strane vršalice. Sečka i gnječilica za slamu »Zmaj« može se upotrebiti i kao posebna mašina. Potrebna pogonska snaga joj je 12—13 KS.



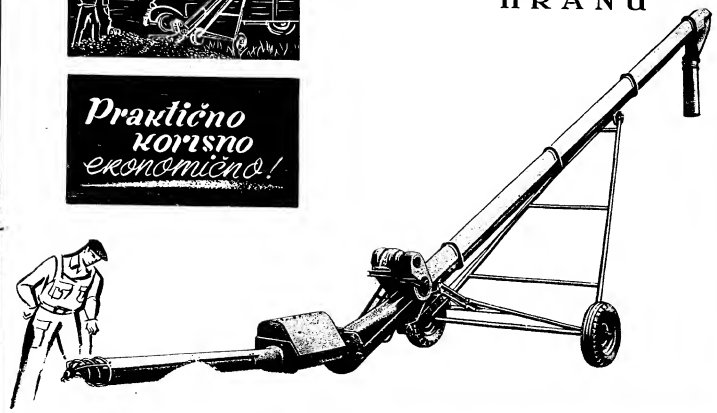
TEHNIČKI PODACI:

TEŽINA	Broj obrtaja bubnja u m.	Učinak na sat
1.050 kgr.	1.300	2.000 kgr.

ZMAJ

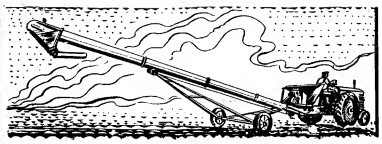
Praktično korisno ekonomično!

Elevator ZA SITNU HRANU



ZMAJ

INDUSTRIJA POLJOPRIVREDNIH MAŠINA

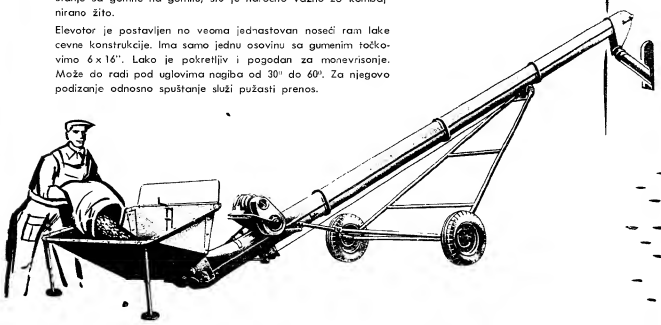


Elevator

ZA SITNU HRANU

Namenjen je za dizonje velikih količino žitarica, suncokreta i sličnog na tavane, u ambare, silose, itd., tojest služi kod svih radova ako usklodištavanja, utovara i istovara zrnaste mase. Zahvaljujući posebnom uređaju za uvlačenje zrna sa gomile, elevator se može veoma korisno upotrebiti za monipulacije sa zrnom u magacinu, kao što je provetravanje zrna, premeštanje sa gomile na gomilu, što je naročito važno zo kombajnirano žito.

Elevator je postavljen no veoma jednostavan noseći ram lake cevne konstrukcije. Ima samo jednu osovinu sa gumenim točkovimo 6 x 16". Lako je pokretljiv i pogodan za monevrisonje. Može do radi pod uglovima nagiba od 30° do 60°. Za njegovo podizanje odnosno spuštanje služi pužasti prenos.



TEHNIČKI PODACI

Težina kgr.	Dužina u metrima				Širina sa prijemnim pužom u metrima	Visina dizanja u metrima		Kapacitet tona/čas	Broj o/min osovine za pogon transportnog lanca	Pogonska snaga
	Sa košem		Sa transportnom spiralom							
	min.	max.	min.	max.		min.	max.			
650	6,52	10,52	9,59	13,59	9,97	4,5	7,5	10–12	270–300	3–5 KS

Prijemni deo elevatora može imati dve varijante: koš, u koji se iz prikolice ili kamiona izručuje zrno i pužasti uređaj koji služi za uvlačenje zrno sa gomile ili iz silasa. Na veoma jednostavan način mogu se ova dva uređaja međusobna zameniti da bi se radilo sa onim koji je prikladniji.
Pogon elevatora vrši se pomoću elektro ili benzinskog motora.

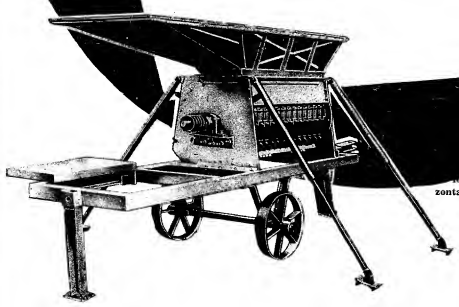
ZMAJ ZEMUN

INDUSTRIJA POLJOPRIVREDNIH MAŠINA

ZMAJ

COUPEUSE UNIVERSELLE ET EBARBEUSE II

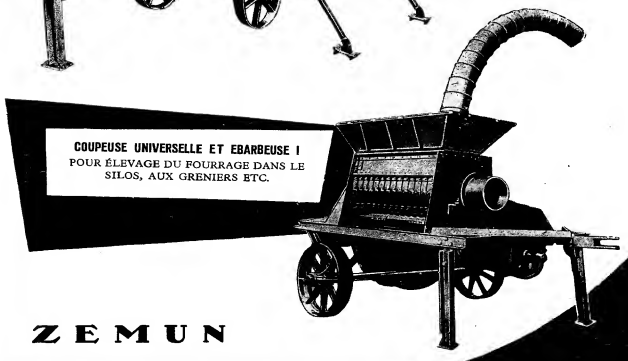
— POUR REMPLISSAGE DES FOSSES DE SILO —



du type
ux roues à
frontale de la
du timon est placé
ant la stabilité nécessaire
ne en ordre de travail, lequel
ève facilement dans la position horizontale durant le transport.

COUPEUSE UNIVERSELLE ET EBARBEUSE I

POUR ÉLEVAGE DU FOURRAGE DANS LE SILOS, AUX GRENIERS ETC.



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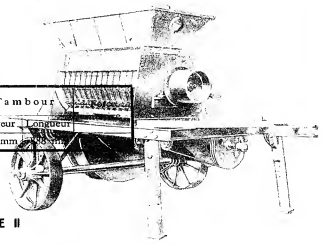
COUPEUSE UNIVERSELLE ET EBARBEUSE I

POUR ÉLEVAGE DU FOURRAGE DANS LE SILOS, AUX GRENIERS ETC.

C'est le modèle plus grand, à spirale scelée, turbine à air et tuyau moyennant lequel on envoit le fourrage à l'hauteur de 10 mètres dans les silos, aux greniers etc. Après que le fourrage soit coupé par les tambours de la coupeuse, le fourrage, haché tombe sur le transporteur helleoidal, qui l'amène à la turbine à air de l'exhausteur et ensuite par un tuyau il est envoyé à l'hauteur désirée.

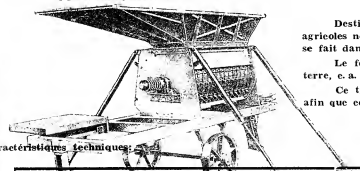


Caractéristiques techniques:

Poids kgs	Débit horaire kgs		Tours/min		Tambour	
	sec	vert	Tambour	Turbine à air	Largeur	Longueur
850	2100	8900	1500	1200	450 mm	888 mm

COUPEUSE UNIVERSELLE ET EBARBEUSE II

— POUR REMPLISSAGE DES FOSSES DE SILO —



Destinée à la préparation du fourrage sur les propriétés agricoles ne possédant pas les silos, et où l'entreposage du fourrage se fait dans les fosses de silo ou aux endroits pareils.

Le fourrage préparé à la coupeuse tombe directement par terre, c. a. d. dans les fosses de silo.

Ce type est posé sur le bâti à pieds télescopiques de côté, afin que cette machine soit fixée en ordre du travail.

Caractéristiques techniques:

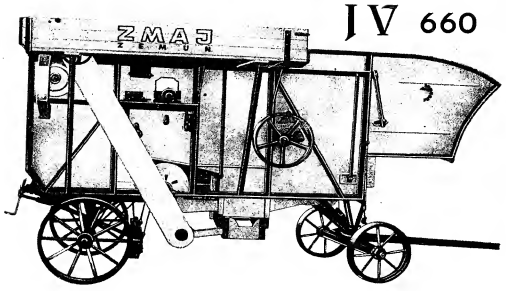
Poids kgs	Débit horaire			Tambour tours/min	Tambour		Force motrice
	sec	vert	betterave		Largeur	Longueur	
450	2500	1200	1500	1500	450 mm	888 mm	15 Cv

ACCESSOIRE LIVRÉ AVEC LA COUPEUSE:

1. **Sabot de fixation des roues**
2. **Pompe »Tecalemit«**
3. **3 graisseur, type »Tecalemit«**
4. **1 clef mecanique**

ZMAJ

JV 660

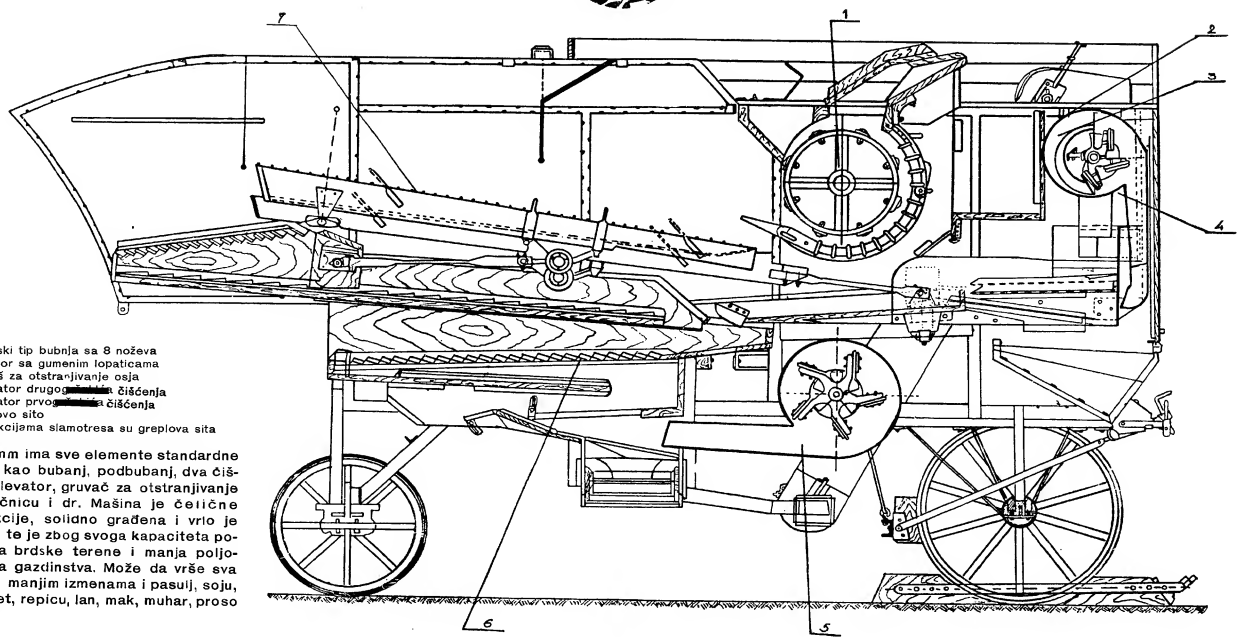


FABRIKA POLJOPRIVREDNIH MAŠINA

ZEMUN

J U G O S L A V I J A

JUGOSLOVENSKA VRSALICA 660 SREDNJEG KAPACITETA



1) Evropski tip bubnja sa 8 noževa
2) Elevator sa gumenim lopaticama
3) Gruvaš za otstranjivanje osja
4) Ventilator drugog [redacted] čišćenja
5) Ventilator prvog [redacted] čišćenja
6) Greplovo sito
7) Na sekcijama slamotresa su greplova sita

JV 660 mm ima sve elemente standardne vršalice kao bubanj, podbubanj, dva čišćenja, elevator, gruvač za otstranjivanje osja, kočnicu i dr. Mašina je čelične konstrukcije, solidno građena i vrlo je stabilna, te je zbog svoga kapaciteta pogodna za brdske terene i manja poljoprivredna gazdinstva. Može da vrše sva žita i sa manjim izmenama i pasuij, soju, suncokret, repicu, lan, mak, muhar, proso i slično.

NA ZAHTEV NARUČIOCA UZ VRŠALICU ISPORUČUJEMO I CIRADU

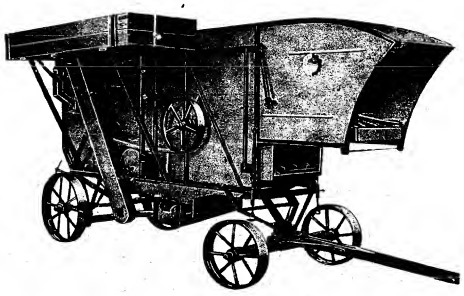
FABRIKA POLJOPRIVREDNIH MAŠINA • ZMAJ • ZEMUN-JUGOSLAVIJA

T E H N I Č K I P O D A C I

Širina bubnja	660 mm
Prečnik bubnja	530 „
Broj noževa na bubnju	8
Broj obrtaja bubnja u minutu	1150
Kapacitet na sat	500—700 kg.
Pogonska šajbna	225 mm
Ukupna dužina	4500 mm
Ukupna širina	2100 mm
Ukupna visina	2400 mm
Potrebna snaga	9 — 12 KS
Težina	1400 kgr

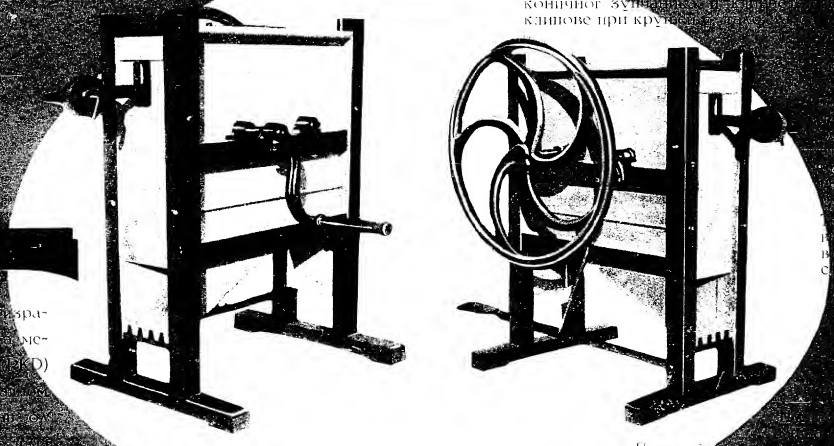
Tražite prospekte i cene za naše ostale proizvode!

R a d i t e s a m a š i n a m a »Z M A J«!



Turistička štampa — Beograd

РУЧНИ КРУЊАЧ КУКУРУЗА



ЗМАЈ

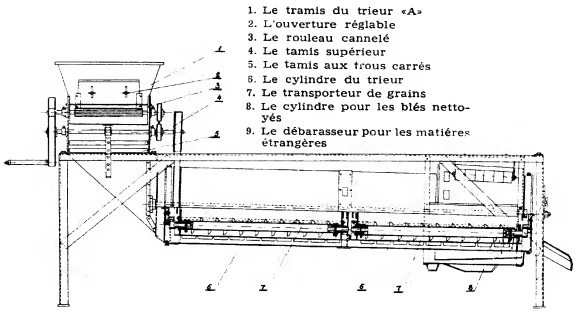
ЗМАЈ

·ZMAJ·ZEMUN

MANIEMENT DU TRIEUR

Pour faire une bonne semence de blé, il faut avoir des graines pures, bien choisies, classifiées et nettoyées de toutes matières étrangères.

Ce travail est facilement exécuté et avec un grand succès en utilisant le trieur-sélecteur ZMAJ qui donnne les meilleurs résultats concernant la pureté des graines et la classification par ordre de grosseur.



1. Le tramis du trieur «A»
2. L'ouverture réglable
3. Le rouleau cannelé
4. Le tamis supérieur
5. Le tamis aux trous carrés
6. Le cylindre du trieur
7. Le transporteur de grains
8. Le cylindre pour les blés nettoyés
9. Le débarasseur pour les matières étrangères

MODE D'EMPLOI

Le blé versé dans la trémie du trieur A (№ 1) se déverse par une ouverture réglable (№ 2) sur un rouleau cannelé (№ 3) qui, en tournant, emporte les grains et les dépose en couches minces sur le tamis fin où ils sont exposés au ventilateur. La puissance du courant d'air se règle au moyen des clapets qui se trouvent des deux côtés du ventilateur et envoient hors du trieur toutes les matières légères, comme poussière, balles etc. Les grains ainsi nettoyés tombent sur un tamis à trous ronds de 4,3 mm. (№ 4), puis sur un tamis muni de trous carrés de 3,3 mm. (№ 5). Ces deux tamis à mouvement de »va et vient« rejettent hors du trieur toutes les matières étrangères, comme cailloux, petites mottes de terre etc.

Les grains ainsi nettoyés passent dans le cylindre du trieur (№ 6) qui tourne autour de son axe incliné de 5 à 7 cm. Ce cylindre est composé de deux parties: la première est formée de cellules (ou alvéoles) de 8,5 mm. de diamètre et d'une profondeur de 3 mm. Les cellules ont pour but de séparer les grains de blé de ceux de l'avoine, du seigle et de l'orge. La deuxième partie du cylindre est munie de cellules de 5,5 mm. de diamètre, d'une profondeur de 2,6 mm. et qui ont pour but d'écarter les grains ronds, tels que gerzeau, nielle etc. Chacune des deux parties du cylindre est munie d'une cuvette en tôle avec un dispositif pour le transport (№ 7). La cuvette se trouvant dans la première partie du cylindre est destinée à recevoir le blé débarassé de l'avoine, du seigle et de l'orge; celle de la deuxième partie du cylindre reçoit les grains de forme ronde, comme le gerzeau, la nielle, les grains cassés etc. Le changement de position des cuvettes dans le cylindre se fait par des régulateurs.

Le blé ainsi nettoyé tombe dans le tamis qui encercle le cylindre et qui tourne avec celui-ci. C'est dans ce tamis qu'on se débarasse du grain médiocre, tandis que le grain de qualité sort par un entonnoir (№ 8).

MISE EN MARCHE ET DISPOSITION DES COURROIES

Un volant en fonte fait fonctionner tout le mécanisme du trieur. Etant donné que le fonctionnement est à main, on a ajusté sur le volant une manivelle par laquelle on l'actionne dans le sens opposé à l'aiguille d'une montre. Par une courroie passée au volant on transmet le mouvement sur la poulie se trouvant sur l'axe du ventilateur. Du côté opposé au volant et sur son axe, donc à l'autre extrémité, se trouve une poulie qui, par une courroie croisée, fait actionner le cylindre. La poulie principale du côté droit fait marcher le cylindre principal du trieur par l'intermédiaire d'une courroie.

1. **Réglage du débit du blé sortant de la trémie**

Par l'abaissement et le soulèvement du couvercle de la trémie du trieur, on règle le débit du blé sortant de la trémie.

2. **Réglage de la puissance de ventilation**

Pour régler la force de ventilation, on se sert de clapets placés des deux côtés du ventilateur.

3. **Réglage d'inclinaison des tamis**

On règle également la position des tamis, plus ou moins inclinée, afin d'obtenir le meilleur tamisage. Lorsqu'on est arrivé à l'inclinaison voulue, on fixe les tamis à l'aide d'écrous à ailettes.

4. **Réglage de fonctionnement du cylindre**

La marche régulière du cylindre est en rapport étroit avec la position des cuvettes se trouvant dans le cylindre.

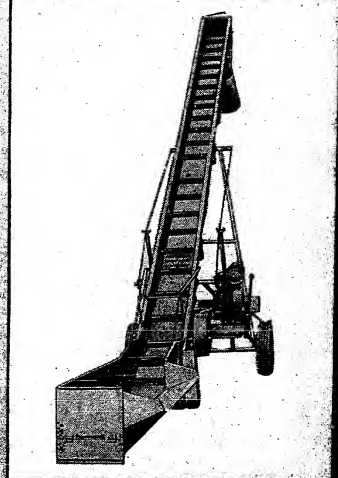
Pour avoir une position régulière des cuvettes, on se sert de deux manivelles qui sont fixées à l'extrémité du trieur. Une des manivelles est destinée pour la mise en position de la cuvette se trouvant dans la première partie du cylindre qui sépare le blé et les fines matières des matières grossières d'avoine et du seigle. La deuxième manivelle sert à mettre en position la cuvette se trouvant dans la deuxième partie du cylindre où s'effectue la séparation du blé des autres grains (gerzeau, nielle) et du grain cassé.

Plus la cuvette est placée bas, plus on obtient le meilleur résultat de triage, mais il faut noter qu'il existe une limite, un point critique, qui ne doit pas être dépassée, car on risque d'avoir une mauvaise sélection.

5. Pour avoir un bon rendement, le trieur doit être posé bien horizontalement.

6. Une fois le travail terminé, le trieur doit être bien nettoyé de tous les grains et autres saletés, accumulées pendant le fonctionnement. Il doit être graissé et remisé dans un endroit sec.

ZMAJ



elevator

ZA KABASTU HRANU

UPUTSTVO
O RUKOVANJU ELEVATOROM ZA KABASTU HRANU

Ovaj priručnik sadrži tačna uputstva u pogledu sklapanja, rukovanja, održavanja i podmazivanja elevatora za kabastu hranu. Osim toga priručnik sadrži ilustrovani brojni indeks svih delova elevatora.

ZMAJ
INDUSTRIJA POLJOPRIVREDNIH MAŠINA
ZEMUN

IZDANJE:

INDUSTRIJE POLJOPRIVREDNIH MAŠINA

ZMAJ

ZEMUN

ŠTAMPARIJA „PROLETER" BEČEJ

KUPCU-KORISNIKU

Uspešan rad Vašeg elevatora za kabastu hranu, koji je konstruisan i izradjen zato da Vam mnogo godina pruža pomoć pri teškim poslovima dizanja tereta, zavisi od toga kako se brinete o njemu i kako sa njim radite.

Poglavlja priručnika, koja se odnose na rukovanje elevatorom, kao i ona o njegovom održavanju, pripremljena su tako da pomognu rukovaocu kako pri redovnom radu sa elevatorom, tako i prilikom podešavanja elevatora za naročite poslove. Posebna pažnja je posvećena uputstvima za pravilno podmazivanje, što je veoma važno i radi čega se treba pridržavati naših preporuka kako u pogledu vrsta maziva, tako i u pogledu učestanosti podmazivanja.

Svakako će biti veoma korisno da brižljivo čitate ovaj priručnik kao i da kontrolišete osoblje koje rukuje elevatorom — da li postupa tačno prema uputstvima. Ako smatrate da su Vam potrebna obaveštenja o kojima nije bilo reči u ovom priručniku, ili ako su Vam potrebni rezervni delovi, pišite nam odmah.

Pre nego što naručite rezervne delove pogledajte Vaš priručnik i iz ilustracija i brojnog indeksa pronadjite tačan broj rezervnih delova koji su Vam potrebni. Pošaljite te brojeve sa potpunim opisom delova, brojem serije Vašeg elevatora i godinom kada je izradjen.

ODREDJIVANJE STRANA

Usvojeno je da se desna, odnosno leva strana elevatora odredjuju kada se, stojeći ispred prijemnog koša, okrenemo licem ka elevatoru. Prednji deo elevatora je kod izlazne glave; zadnji kod prijemnog koša.

RASPOZNAVANJE

Tačno ime Vašeg elevatora je:

ELEVATOR ZA KABASTU HRANU

Pazite da uvek navedete ovo ime, tip i seriski broj kada pišete fabrici o elevatoru.

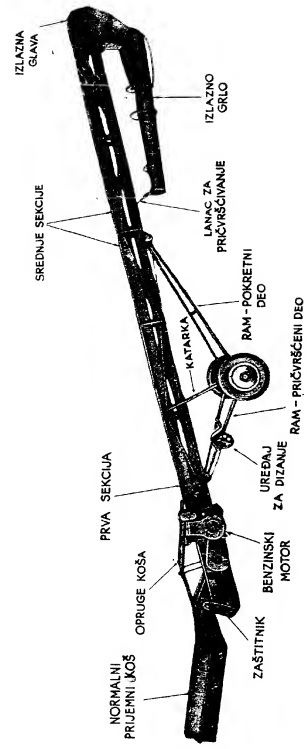
Uvek proverite da li ste napisali tačno seriski broj elevatora kada pišete i naručujete rezervne delove.

Datum uručivanja uputstva korisniku .....

Kome je uputstvo uručeno .....

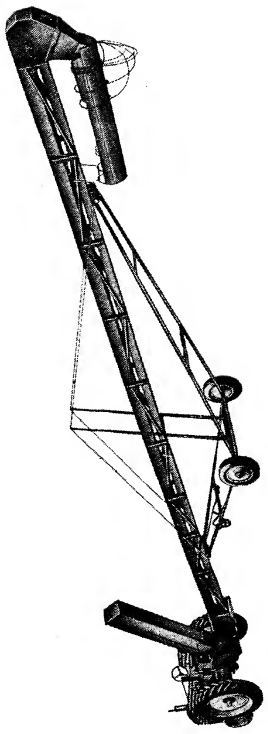
.....

Seriski broj mašine za koju se uputstvo daje .....



Slika 1. Elevator za kabastu hranu. Tip A, dužina 7,5 m.

S A D R Ž A J :



Slika 2. Elevator za kabastu hranu. Tip D, dužine 15 metara.

VISINA DIZANJA

Kukuruz u klipu i slično

Elevator će raditi sa najboljim učinkom kada je postavljen pod uglom dizanja izmedju 35 i 40°. Medjutim on će raditi sasvim zadovoljavajuće, naravno sa nešto smanjenim kapacitetom, ako se postavi i pod uglom od 45°.

Balirano seno ili slama

Bale slame ili sena mogu se dizati sa nagibom elevatora do 45°. Ukoliko im je hajuža strana široka do 35 cm postavljaju se tom stranom u samo korito; inače se dižu postavljene jednom ivicom u korito, pri čemu je najbolji ugao dizanja 30°.

Tablica dužina elevatora i visina dizanja

Tip elevatora	A	B	C	D	
Broj sekcija	3	4	5	6	komada
Dužina elevatora	7,5	10	12,5	15	metara
Najveća visina dizanja	5,5	7,2	8,75	10,5	metara

Uz navedeni broj sekcija elevatora dolazi:
normalni ili povećani prijemni koš;
kratki ili dugi (teleskopski) noseći ram;
produžetak izlazne glave;
elektro ili benzinski pogonski motor;
iskretač prikolica.

RAD ELEVATORA

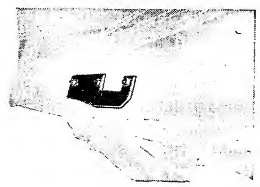
Pre no što se nov elevator pusti u rad treba da bude dobro podmazan. Pustiti ga da radi na prazno dugo, da bi se moglo videti jesu li svi delovi tačno sklopljeni i odgovarajuće podešeni.

Ispravan radni ugao elevatora, koji se preporučuje za različite materijale koji se dižu, birati prema uputstvu iz poglavlja „Visina dizanja".

Nikad ne treba vršiti bilo kakva podešavanja dužine teleskopskog nosećeg rama elevatora ako pokretni deo rama (broj 2 na slici 15 strana 18) nosi težinu elevatora. Kada se vrši podešavanje nosećeg rama, treba sam elevator podići dizalicom sa rama ili osloniti gornji kraj elevatora na drveni jaram (kao što se vidi na slici 16 strana 19).

Pri transportovanju elevatora produžnu cev izlazne glave treba pričvrstiti lancem za donji deo poslednje sekcije elevatora (vidi sliku 2 na 8 strani).

Kad se elevator transportuje i kreće po lošem zemljištu, treba pričvrstiti vodjice pokretnog dela nosećeg rama za odgovarajući članak, kako je to prikazano na slici 3. To će zaštititi elevator od iskakanja sa vodećih valjaka. Kad se transportuje elevator na dugom teleskopskom nosećem ramu, njegovu težinu treba da nose čelična užad a ne sigurnosna poluga.



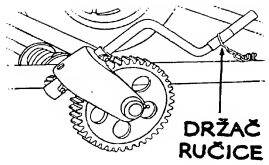
Slika 3

Zaštitnici su postavljeni zato da bi Vas sačuvali od opasnih delova mašine. Postavite ih na njihova mesta kadgod radite sa elevatorom.

Kad se elevator stavlja na duže vreme u magacin, treba ga dobro podmazati kako bi bio zaštićen od rdje.

Kad elevator stavljate u magacin — šupu, katarku (videti sliku 1 strana 6) možete spustiti do najnižeg položaja ukoliko to zahteva visina tavanice.

Kad nije u upotrebi, ručica uredjaja za dizanje elevatora treba da bude pričvršćena pomoću lanca, kako je to prikazano na slici 4.



Slika 4

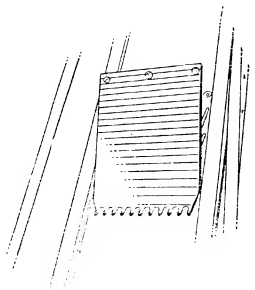
Gume, na kojima su postavljeni noseći ramovi, treba da imaju pritisak od 1,9 atmosfera kod dužine elevatora od 12,5 i 15 metara (tipovi C i D); odnosno 1,7 atmosfera kod dužine elevatora od 7,5 i 10 metara (tipovi A i B).

Priprema elevatora za dizanje klipova kukuruza i sitnozrnaste hrane

Elevator treba da radi sa 115—124 obrta u minuti na donjoj osovini transportnog lanca. Tablica na strani 43 daje brzine sa kojima pogonski mehanizam treba da radi kod dizanja pojedinih materijala. Treba kontrolisati da li je upotrebljen ispravan lančanik na prijemnom košu (27 žuba za kukuruz u klipu a 25 zuba za sitno zrno).

Kad se elevator upotrebljava za dizanje sitnog zrna, pričvrstiti zavrtnjima poklopac preko sitastog otvora na prvoj sekciji. Radi toga skinuti najpre zavrtnje sa levka za izdvajanje i skupljanje na stranu zrna koja propadnu kroz sitaste otvore pa uvući nazubljeni kraj specijalnog poklopca u najniže proreze.

Postaviti, zatim, ravne podmetače i navrtke na zavrtnje, privarene na donjoj strani poklopca i čvrsto pritegnuti. Pričvršćivanje



Slika 5

gornjeg dela poklopca vršiti zavrtnjima koji se i inače upotrebljavaju za pričvršćivanje levka za izdvajanje promaklog zrna. Videti sliku 5.

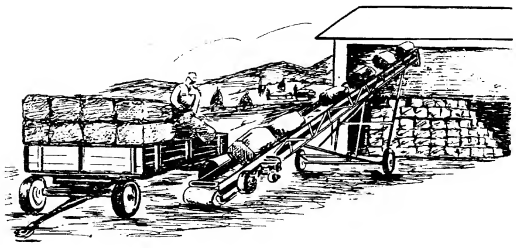
Dizanje bala sena, odnosno slame

Kad se dižu bale sena, odnosno slame, onda se bale do širine 35 cm mogu položiti na stranu u korito elevatora i dizati do ugla od 45°. Šire bale se moraju dizati iskošene na jednu ivicu i to najbolje do ugla od 30°.

Brzina na donjoj pogonskoj osovini lanca sme da bude 85 do 100 obrta u minuti.

Tačka vezivanja nosećeg rama za elevator na prvoj sekciji može se pomerati naviše po prvoj sekciji da bi se — ako se to želi — dobila veća težina na tom delu elevatora.

Napomena: *Videti instrukcije za pripremu elevatora za dizanje baliranog sena na strani 42.*



Slika 6

Potrebna pogonska snaga

Elevatori dužine 7,5 i 10 metara radiće zadovoljavajuće sa benzinskim pogonskim motorom od 3 KS. Iznad te dužine, za teže poslove, potrebna je dopunska pogonska snaga.

Elektromotor jačine 2 KS dovoljan je za pogon elevatora dužine 7,5 i 10 metara (tipovi A i B) dok je za duže elevatore (tipovi C i D) potreban elektromotor jačine 3 KS.

Podešavanje spojnice

Pre nego što nov elevator počne da radi treba olabaviti klizeću spojnicu i skinuti sa nje boju. Delove spojnice treba dobro podmazati. Pomoću zavrtnja, koji klizi po bregu, spojnicu treba upravo onoliko pritegnuti koliko je dovoljno da prenese opterećenje. Kad spojnica počne da klizi, pritegnuti zavrtanj za podešavanje.

PODMAZIVANJE

Ekonomičan i efikasan rad svake mašine zavisi od ispravnog i redovnog podmazivanja svih pokretnih delova kvalitetnim mazivom.

Podmazujte sve delove brižljivo, ali izbegavajte prekomerno podmazivanje. Prekomerno podmazivanje će stvoriti — oko mesta koja se podmazuju — višak maziva koji će samo skupljati prašinu i nečistoću.

Za podmazivanje treba upotrebljavati čistu, dobru tovotnu mast i kvalitetno ulje.

Podmazivanje pogonskih galovih lanaca i lančanika uljem produžiće vek njihovog trajanja, osim ako oni rade u izuzetno peskovitim uslovima.

Ako se neka mazalica (nipl) olabavi, treba je odmah zameniti novom. Uklanjajte prljavštinu sa mazalica pre no što pristupite podmazivanju

Točkove treba podmazivati na početku svake sezone.

Ne podmazujte uljem niti mašću diskove spojnice.

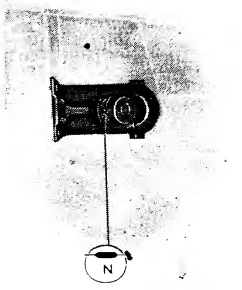
Svakodnevno podmazati uljem klizeće površine na osovini i konusu spojnice, kako bi lako klizili.

Plan podmazivanja

Na sledećim slikama prikazana su sva mesta za podmazivanje na elevatoru za kabastu hranu. Istovremeno je, pomoću simbola, objašnjeno koje mazivo i koliko često treba primenjivati.

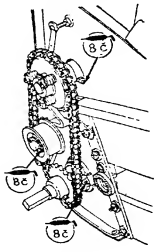
Izlazna glava

Slika 7



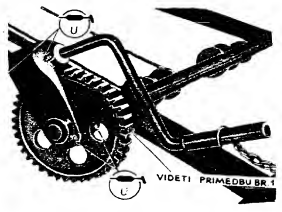
Slika 8

Pogon prijemne sekcije



Slika 9

Uredjaj za podizanje



Slika 10

Primedba broj 1: Premazati četkom natopljenom uljem zube zupčanika kadgod je to potrebno.

SIMBOLI

Podmazivati svakih 8 sati tovotnom mašću.

Podmazivati jednom nedeljno tovotnom mašću.

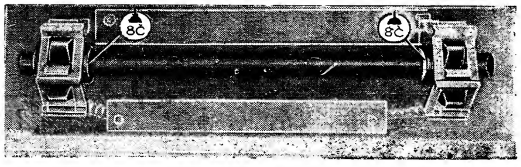
Podmazivati svaki put pre početka rada tovotnom mašću.

Podmazivati uljem svakih 8 sati rada.

Osovina koturova za podizanje rama

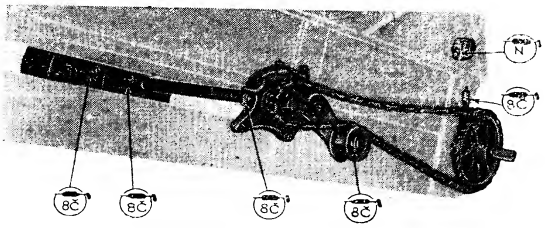
Slika 11

Príjemni koš



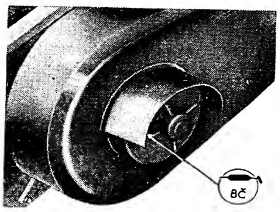
Slika 12

Prenos na pogonsko vratilo



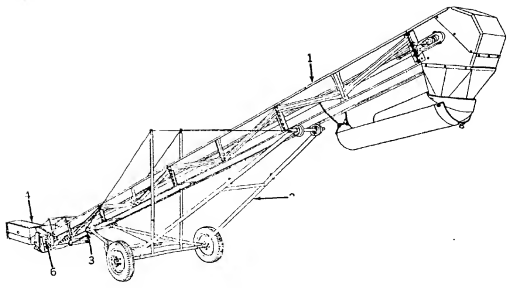
Slika 13

Kod pogona benzínskim motorom



Slika 14

SKLAPANJE



Slika 15

Preporučuje se sledeći postupak pri sklapanju elevatora:

1. Sklopiti, najpre, elevatorske sekcije na način koji je objašnjen u sledećem poglavlju;
2. Sklopiti potpuno noseći ram;
3. Podvući noseći ram ispod elevatora i pričvrstiti pločice za vezivanje nepokretnog dela rama za prijemnu sekciju;
4. Postaviti prijemni koš;
5. Podići elevator;
6. Postaviti pogonski motor.

Elevatorske sekcije

Pri spajanju elevatorskih sekcija treba postupati na sledeći način:

Postaviti najpre prijemnu sekciju na drveni podmetač visok najmanje 20 cm. Potrebna dužina elevatora se zatim dobija postavljanjem onolikog broja srednjih sekcija — koliko je potrebno.

Za tip:

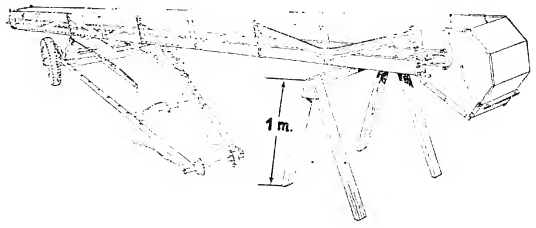
A postavljaju se dve srednje sekcije;
B postavljaju se tri srednje sekcije;
C postavljaju se četiri srednje sekcije;
D postavlja se pet srednjih sekcija.

Sekcije treba vezati sa prijemnom sekcijom pomoću zavrtanja i to tako da se najpre postave donji zavrtnji. Zatim treba podići slobodni kraj sekcije, priljubiti odgovarajuće prirubnice i postaviti preostale zavrtnje. Proveriti da li gornje korito prijemne sekcije leži preko gornjeg korita prve srednje sekcije; a donje korito prijemne sekcije preko donjeg korita prve srednje sekcije.

Sa donje strane pričvrstiti limove za vezu pomoću torband zavrtanja.

Kako se koja sekcija pričvrsti tako treba povećati broj drvenih jarmova koji drže elevator da ne bi pao na zemlju.

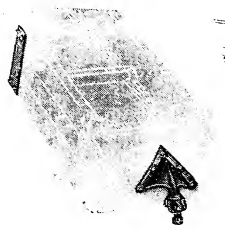
Izlaznu glavu treba vezati na isti način, na koji se vezuju i srednje sekcije. Lim koji štiti osovinu izlazne glave mora da bude ispod gornjeg korita srednje sekcije za koju je pričvršćena glava.



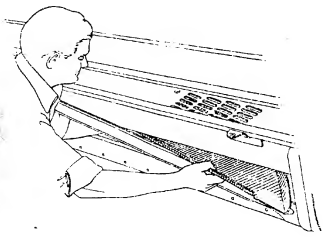
Slika 16

Kad su sekcije elevatora potpuno vezane medjusobom, predni deo elevatora — na mestu gde se nalazi izlazna glava

— treba da leži najmanje jedan metar iznad zemlje, kako bi noseći ram mogao da se podvuče ispod elevatora.



Slika 17



Slika 18

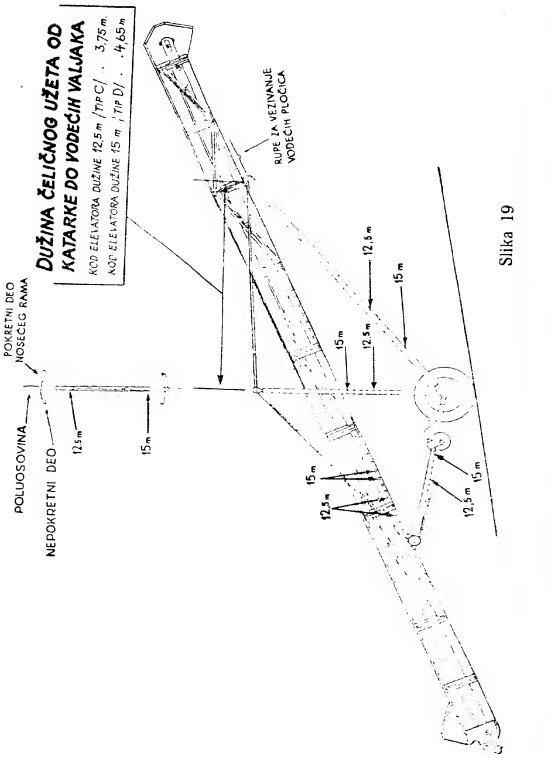
Limove za ojačanje bočnih stranica prijemne sekcije treba pričvrstiti pomoću zavrtanja onako, kako se to vidi na slici 17.

Na čeonom delu prijemne sekcije treba pomoću zavrtanja pričvrstiti poteznicu. (Videti sliku 17).

Zatim treba postaviti limeni levak za skupljanje okrunjenog zrna sa donje strane prijemne sekcije, onako kako se to vidi na slici 18. Levak se, ukoliko se želi, može postaviti i kasnije, kada je elevator već podignut na svoj ram.

Postavljanje lanca sa poprečnim prečagama vrši se tako da veća kuka karike bude okrenuta prema izlaznoj glavi. Zatezanje lanaca vrši se pomoću zavrtnjeva na izlaznoj glavi. Ovi, takozvani „lebdeći lanci" kod prenosnih tipova elevatora dobijaju pogon sa donjeg vratila (sa vratila prijemne sekcije), te je radi zadovoljavajućeg rada neophodno da budu zategnuti.

PRAVILNO POSTAVLJANJE NOSEĆEG RAMA KOD RAZLIČITIH TIPOVA ELEVATORA



Slika 19

Postavljanje delova nosećeg rama

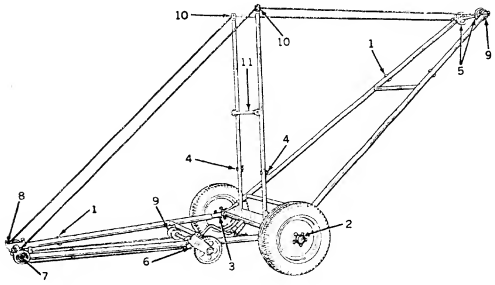
Kod elevatora dužine 12,5 metara (tip C) delovi koji se izvlače postavljaju se u petu rupu.

Kod elevatora dužine 15 metara (tip D) delovi koji se izvlače postavljaju se u devetu rupu — najveće produženje.

Da biste pričvrstili vodeće pločice na tačno odredjeno mesto — u tačno odredjeni položaj — pri transportovanju elevatora (slika 3), podignite ručicom elevator tako da on oslobodi ili sigurnosnu gredu ili katarku. Tada pričvrstite zavrtnjima vodeće pločice za sekciju sa obeju strana valjaka za vodjenje.

Mesta za pričvršćivanje se preporučuju za odredjenu dužinu sekcija elevatora i to onih koji imaju produžetak na izlaznoj glavi, prijemni koš i pogon na prvoj sekciji. Ako se elevator upotrebljava bez produžetka izlazne glave, bez prijemnog koša i pogonskog motora ili ako se mesto za pričvršćivanje iz bilo kog razloga mora pomerati onda se moraju izvršiti izvesna razumljiva pomeranja radi podešavanja ravnoteže elevatora. Pri svemu tome mora se obratiti pažnja pri odredjivanju navedenih rupa za vezivanje, kako elevator ne bi bio isuviše težak na prednjem delu prilikom podizanja radi menjanja radnog ugla.

Teleskopski noseći ram za elevatore dužine 12,5 i 15 metara (tipovi C i D)



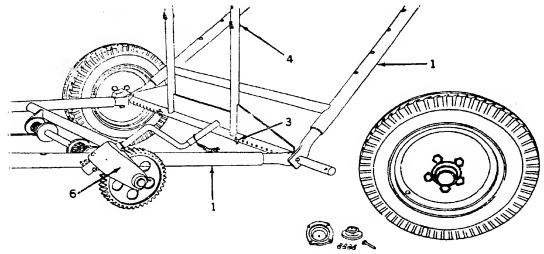
Slika 20

1. (Uz sliku 20). Razvući teleskopske cevi nepokretnog i pokretnog dela nosećeg rama do dužine koja odgovara elevatoru koji sklapamo. Na strani 22 videti uputstvo za odredjivanje rupa koje treba upotrebiti pri sklapanju da bi se dobila dužina elevatora koja se želi. Posle toga postaviti zavrtnje kroz rupe i izvršiti spajanje. Slika 20 pokazuje ispravan položaj vezivanja za elevator dužine 10 metara. Elevatori tipa C i D mogu se, skidanjem pojedinih sekcija, da skrate na dužinu od 10 metara. Da bi se i u tom slučaju mogao upotrebiti dugi teleskopski ram za nošenje ovako skraćenog elevatora, koriste se rupe za vezivanje označene brojem 1.

2. (Uz sliku 20). Skinuti poklopac glavčine točka, ležište dobro ispuniti mazivom i ponovo postaviti poklopac.

3. (Uz sliku 21). Pokretni deo nosećeg rama nalazi se sa spoljašnje a nepokretni deo sa unutrašnje strane.

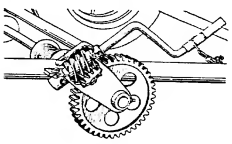
Kroz njihove otvore uvlači se poluosovina sa potpuno montiranim točkom u cev — nosač osovine i katarke. Postaviti zavrtnje za spajanje poluosovina i cevi birajući odgovarajuće rupe prema uputstvu na strani 21. Na slici 21 skinut je točak kako bi se uočili delovi: poluosovina, ramovi, sklop točka i delovi za spajanje.



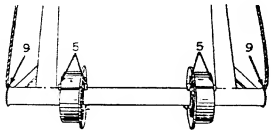
Slika 21

4. (Uz sliku 20). Postaviti zavrtnje kroz odgovarajuće rupe na katarci, prema uputstvu na strani 21. Zatim spustiti produžetak katarke naniže dok se ne nasloni na zavrtanj.

5. (Uz sliku 23). Pričvrstiti medjusobno polovine valjaka za vodjenje koji se nalaze na poprečnoj cevi pri vrhu pokretnog dela elevatorskog nosećeg rama i to tako da prirubnice budu okrenute prema unutrašnjoj strani. Zatim staviti rascepke koje treba da drže valjke za vodjenje na jednom mestu.



Slika 22



Slika 23

6. (Uz sliku 21). Postaviti puž i otstojni prsten u kućicu uredjaja za podizanje elevatora i to tako da podmetač dodje sa strane kraćeg ležišta. Dovesti u istu liniju rupu na pužu sa rupom na vrhu kućice. Tada uvući ručicu kroz kućicu, prsten i puž sa strane kraćeg ležišta. Zatim pričvrstiti puž za ručicu pomoću specijalnog zavrtnja.

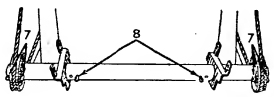
Pošto je ovo učinjeno, treba navući jednu stranu kućišta na osovinu koturova za podizanje rama, postaviti pužno kolo na njegovo mesto i zatim navući pužno kolo i kućicu na osovinu — upotrebljavajući jedan ili dva otstojna prstena, ukoliko je to potrebno. Pošto se izravnaju rupe u glavčini pužnog kola i osovine, ubaciti čiviju za njihovo medjusobno spajanje.

Kućicu treba pričvrstiti zavrtnjem za držač koji se nalazi na strani nepokretnog cevnog rama. Najzad, treba postaviti mazalice i sve dobro podmazati.

Slika 22 pokazuje izgled preseka kroz kućište.

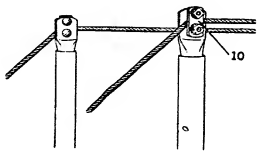
7. (Uz sliku 24). Postaviti točkove za vodjenje čeličnog užeta (koturače) na krajeve poprečne cevi nepokretnog dela nosećeg rama i svaki osigurati sa po dve rascepke.

8. (Uz sliku 24). Postaviti rascepke kroz unutrašnje rupe poprečne cevi da bi držale limove za vezivanje nepokretnog dela rama.



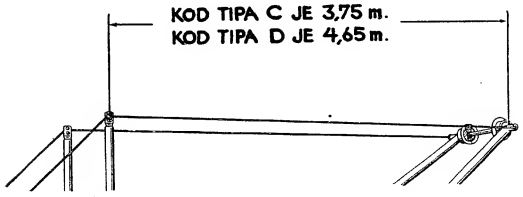
Slika 24

9. (Uz sliku 24). Provući jedan kraj čeličnog užeta kroz cev. Zatim krajeve užeta voditi preko celog nosećeg rama i oko koturača na poprečnoj cevi nepokretnog dela rama i vratiti ih natrag do kalemova za namotavanje. Najzad treba pričvrstiti krajeve užeta za kalemove, upotrebljavajući klinove za njihovo ukleštenje.



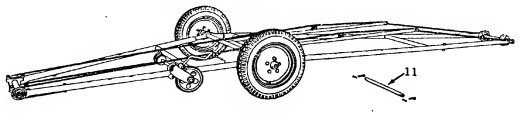
Slika 25

10. (Uz sliku 25). Postaviti pločicu za držanje na cev za produženje katarke i postaviti uže na njegovo mesto, ali ne pritezati zavrtnje. Najpre smotati višak užeta.



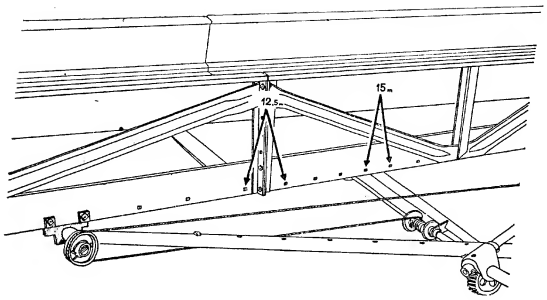
Slika 26

Uspraviti katarku i izmeriti dužinu užeta od centra valjaka na pokretnom kraju rama do katarke (videti sliku 26). Radi izbora tačne dužine pogledati priloženu tablicu. Najzad pritegnuti zavrtnje koji drže ploču.



Slika 27

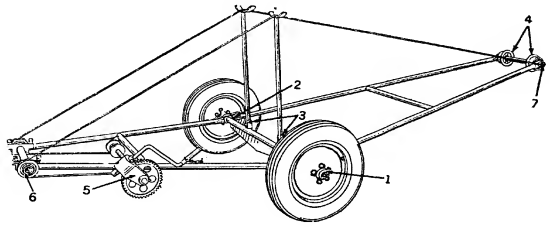
11. (Uz sliku 27). Ukloniti sigurnosnu polugu sa katarki. Spustiti katarke (prema slici 27) i podvući noseći ram pod elevator (prema slici 16).



Slika 28

Kada pričvršćujete noseći ram za prijemnu sekciju proverite da li su ploče za vezivanje postavljene i zavrtnjima pričvršćene za odgovarajuće rupe. Slika 28 prikazuje preporučene rupe za različite dužine elevatora.

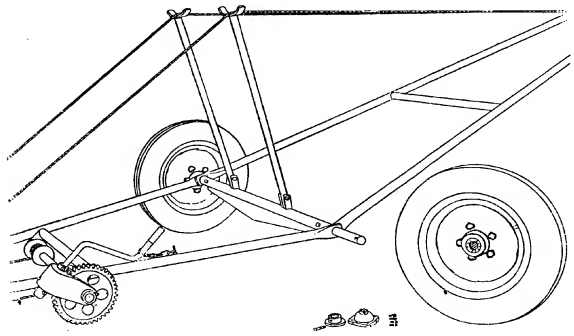
Kratki noseći ram za elevatore dužine 7,5 i 10 metara (tipovi A i B)



Slika 29

1. (Uz sliku 29). Pre postavljanja točkova na osovine treba skinuti poklopce s glavčina i dobro podmazati oba ležišta. Poklopce opet vratiti natrag po podmazivanju.

2. (Uz sliku 29). Kompletan točak sa montiranom poluosovinom uvući u cev nosećeg rama i pričvrstiti ih zavrtnjima. Slika 30 pokazuje noseći ram sa uspravljenom katarkom, kompletne točkove sa poluosovinama i zavrtnjeve za vezivanje.

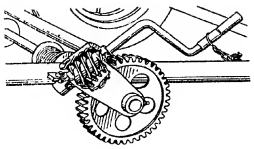


Slika 30

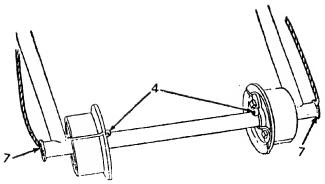
3. (Uz sliku 29). Pričvrstiti zavrtnjima katarku.

4. (Uz sliku 32). Pričvrstiti medjusobno polovine valjaka za vodjenje koje se nalaze na poprečnoj cevi pri vrhu pokretnog dela elevatorskog rama i to tako da prirubnice budu okrenuteka unutrašnjoj strani. Zatim postaviti rascepke koje treba da drže valjke za vodjenje na jednom mestu.

5. (Uz sliku 29). Postaviti puž i otstojni prsten u kućicu uredjaja za podizanje elevatora tako da podmetač dodje sa strane kraćeg ležišta. Dovesti u istu liniju rupu na pužu sa rupom na



Slika 31



Slika 32

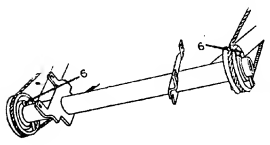
vrhu kućice. Tada uvući ručicu kroz kućicu, prsten i puž sa strane kraćeg ležišta. Zatim pričvrstiti puž za ručicu pomoću specijalnog zavrtnja.

Pošto je ovo učinjeno, treba navući jednu stranu kućišta na osovinu koturova za podizanje rama, postaviti pužno kolo na njegovo mesto i zatim navući pužno kolo i kućicu na osovinu — upotrebljavajući jedan ili dva otstojna prstena, ukoliko je to potrebno. Pošto se izravnaju rupe u glavčini pužnog kola i osovine, ubaciti čiviju za njihovo medjusobno spajanje.

Kućicu treba zavrtnjem pričvrstiti za držač koji se nalazi na strani nepokretnog cevnog rama. Najzad, treba postaviti mazalice i sve dobro podmazati.

Slika 31 pokazuje izgled preseka kroz kućište.

6. (Uz sliku 33). Postaviti točkove za vodjenje čeličnog užeta (koturače) na krajeve poprečne cevi nepokretnog dela nosećeg rama i svaki osigurati sa po dve rascepke.

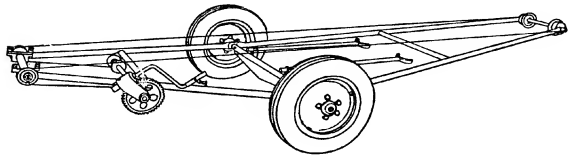


Slika 33

Slika 34

7. (Uz sliku 32). Provući jedan kraj čeličnog užeta kroz cev. Voditi oba kraja užeta preko katarke i celog nosećeg rama, oko koturača na poprečnoj cevi nepokretnog dela rama i natrag do kalemova za namotavanje. Pričvrstiti krajeve užeta, upotrebljavajući klinove za ukl¡ještenje. Namotati suvišno uže.

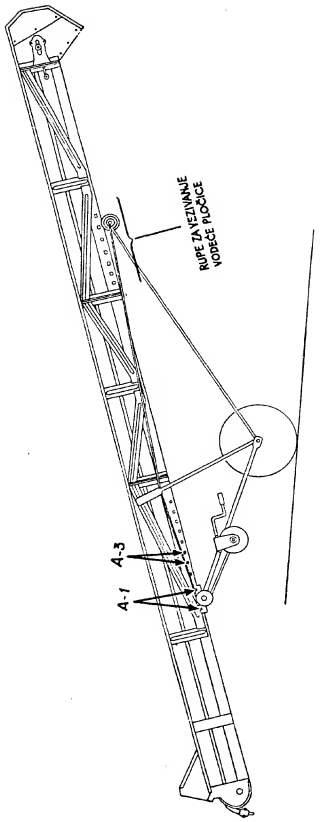
8. (Uz sliku 34). Pričvrstiti zavrtnjima vodeće ploče. Videti uputstva o tačnom položaju ploča na strani 31.



Slika 35

Oboriti katarku i podvući noseći ram pod elevator (slika 35).

Kada pričvršćujete noseći ram za prvu sekciju elevatora proverite da li su držači nepokretnog dela rama postavljeni prema tačnim rupama. Slika 36 na strani 31 prikazuje preporučene rupe za različite dužine elevatora. Postaviti katarku u odredjeni položaj, sa užetom prebačenim preko vrha katarke i podići elevator.



Slika 36

PREPORUČENI POLOŽAJI ZA VEZIVANJE NEPOKRETNOG DELA NOSEĆEG RAMA KAO I VODEĆE PLOČICE

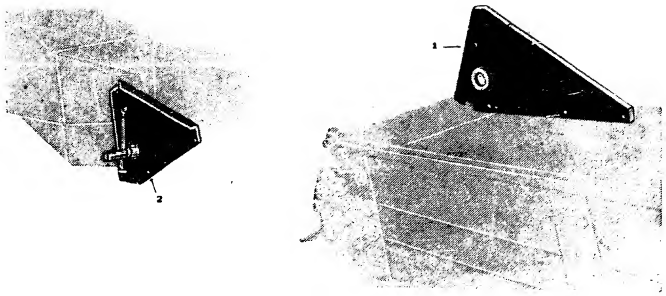
Za elevatore dužine 7,5 i 10 metara (tipovi A i B)

Dužina elevatora	Položaj oslonca nepokretnog dela rama
Tip A — 7,5 m sa košem i izlaznom glavom	A — 1
Tip B — 10 m sa košem i izlaznom glavom	A — 3

Pre učvršćivanja vodećih pločica na tačno odredjeno mesto, pri transportovanju elevatora, treba pomoću uredjaja za dizanje spustiti elevator tako da leži izmedju katarki. Tek tada se mogu pričvrstiti vodeće ploče za sekciju, sa svake strane valjaka pokretnog dela rama elevatora.

Prikazani položaji za vezivanje preporučuju se za dobru uravnoteženost sa produžetkom na izlaznoj glavi i prijemnim košem. Svaka promena u ravnoteži koja proizlazi od upotrebe elevatora bez produžetka na izlaznoj glavi ili bez prijemnog koša — nekad i zbog razlike u težini pogonskog motora — mora se nadoknaditi izmenom tačaka za vezivanje nosećeg rama i elevatora tako da se težina koja dolazi na prednji kraj elevatora ne poveća do te mere da učini rukovanje elevatorom opasnim.

Normalni i dugi prijemni koš



Slika 37

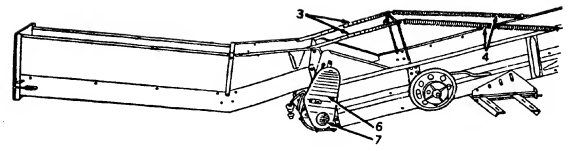
Normalni, kao i dugi, prijemni koš ima jednu bočnu stranu fiksnu, a druga se može otvarati. Oba koša se mogu otkačiti od prve sekcije, a osim toga mogu se podići unapred što je neophodno kod prilaženja prikolica, kao i pri transportovanju elevatora.

1. (Uz sliku 37). Pričvrstiti zavrtnjima levi limeni nosač prijemnog koša.

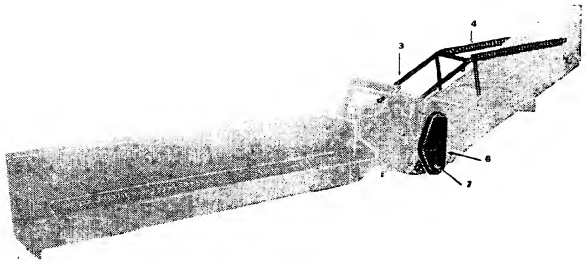
2. (Uz sliku 37). Postaviti desni limeni nosač prijemnog koša preko ležišta osovine, podići prijemni koš na njegovo mesto i zavrtnjima pričvrstiti nosač za prvu sekciju.

3. (Uz sliku 38). **Za normalni prijemni koš** najpre vezati poluge za nosač opruga i postaviti rascepke tako da poluge budu izmedju njih i savijenog dela nosača opruge. Vezati zatim nosač opruga za prvu sekciju i osigurati ga takodje rascepkama.

3a. (Uz sliku 39). **Za dugi prijemni koš** najpre vezati poluge za nosač opruga i postaviti rascepke tako da poluge budu izmedju njih i savijenog dela nosača opruga. Zatim, drugi kraj poluga pomoću dvostrukih kuka učvrstiti za prijemni koš. Vezivanje osigurati rascepkama.



Slika 38



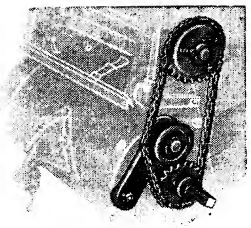
Slika 39

4. (Uz sliku 38 i 39). Uspraviti prijemni koš i vezati opruge za nosač. Posle toga se opruge vezuju za prvu sekciju.

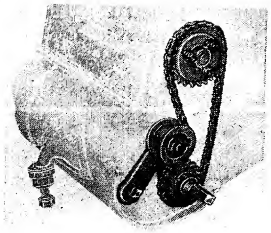
5. Postaviti lančanik sa dvadeset zuba na osovinu prve sekcije. Lančanici sa dvadesetsedam ili dvadesetpet zuba i ugrađenom isključnom osiguravajućom spojnicom postavljaju se na osovinu glave prijemnog koša. Zatim se postavlja pogonski lanac i koturi za pritezanje.

Za klipove kukuruza upotrebljavati lančanik sa dvadesetsedam zuba; kotur za pritezanje treba da stoji u položaju koji je prikazan na slici 41. Za sitno zrnevlje treba postaviti lančanik sa dvadeset i pet zuba, a kotur za pritezanje u položaj prema slici 40.

6. (Uz sliku 39). Postaviti zaštitnik za pogonske lance.



Slika 40



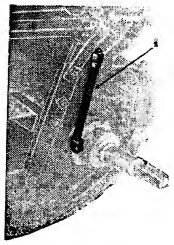
Slika 41

7. (Uz sliku 39). Liveni osigurači oblika loptine kalote mogu da se postave na obe strane osovine prvog članka.

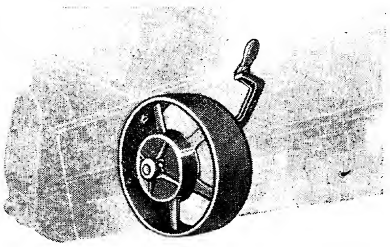
Lančani prenos

1. Postaviti cev i mazalicu u ležište osovine prve sekcije, kako je to prikazano na slici 42.

2. Pričvrstiti zavrtnjima nosač prenosa za prvu sekciju.



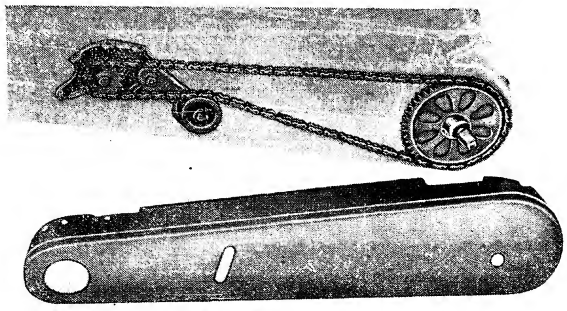
Slika 42



Slika 43

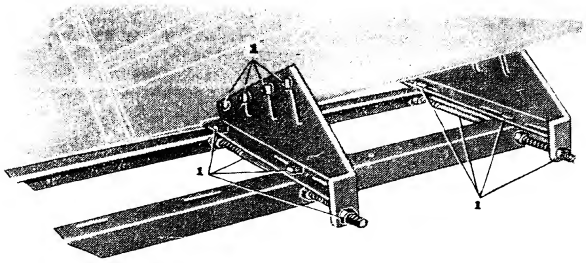
3. Postaviti lančanik na osovinu prve sekcije, a zatim pogonski lanac i kotur za pritezanje.

4. Pričvrstiti zavrtnjima zaštitnike.



Slika 44

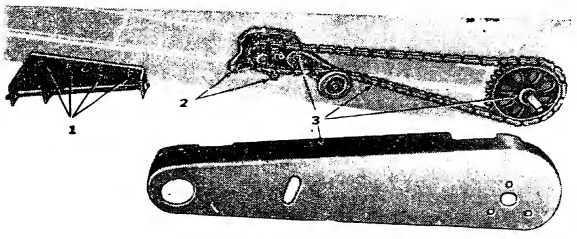
Pogon elektro motorom



Slika 45

Postaviti cev i mazalicu u ležište osovine prve sekcije onako kako je to prikazano na slici 42.

1. Pričvrstiti zavrtnjima ugaonike za noseće ploče tako da zavrtnji na levoj strani stoje okrenuti navrtkama na dole a zavrtnji na desnoj strani navrtkama okrenutim na gore. Postaviti duge, gole zavrtnje za pritezanje kroz noseće ploče i ugaonike. Navrtke dodju sa svake strane ugaonika. Navrtke staviti, ali ih ne pritezati dok motor ne bude postavljen. Najzad treba vezati sklop nosača za prvu sekciju.

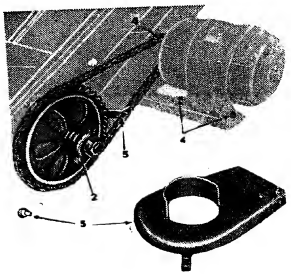


Slika 46

2. Zatim postaviti prenosnu osovinu prve sekcije. Pričvrstiti pomoću čivije držač klizećeg lančanika za osovinu i postaviti sam lančanik uz držač. Oprugu treba postaviti izmedju dva ravna podmetača i pritegnuti je pomoću navrtke upravo onoliko koliko je dovoljno za prenos opterećenja. Kada je sklopljeno, sve treba dobro podmazati.

3. Pričvrstiti lančanike za osovinu prve sekcije pomoću čivije. Posle toga postaviti pogonske lance i pritezač. Na kraju pričvrstiti zaštitnike zavrtnjima.

4. Lančanik na motoru treba spojiti pomoću klina i osigurati zavrtnjem za pričvršćivanje. Zatim treba vezati zavrtnjima motor za njegove ugaone nosače. Pošto se postavi pogonski lanac, treba ga pritegnuti pomeranjem sklopa ugaonika kroz razreze nosećih ploča. Pošto je lanac zategnut, pritegnuti navrtke na zavrtnjima za pričvršćivanje.



Slika 47

5. Pri pričvršćivanju nosećih ploča upotrebiti prstenaste elastične podloške i dvostruke navrtke. Na kraju treba postaviti zaštitnike.

Pogon benzinskim motorom sa vazdušnim hladjenjem

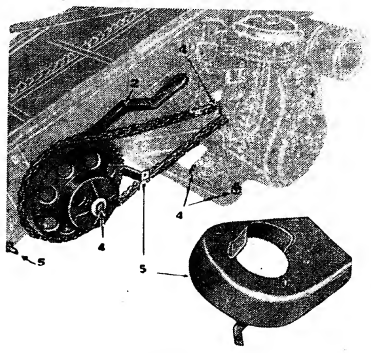
1. Benzinski i elektromotor koriste iste noseće ploče i ugaonike. Radi toga treba najpre pročitati uputstvo iz prethodnog poglavlja pod tačkom 1 i videti odgovarajuću sliku 45.

2. Zatim treba postaviti prenosnu osovinu na donjem delu prve sekcije, prema slici 46. Osim toga, treba postaviti uzengiju i ručicu spojnice, pogonski lančanik i uključivač, pantljiku za spajanje i kutiju. (Prema slici 48).

Postaviti cev i mazalicu u ležište osovine prve sekcije onako kako je to prikazano na slici 42.

3. Vezati čivijom lančanik osovine prve sekcije. Postaviti pogonski lanac i pritezač. Pričvrstiti zavrtnjima zaštitnike.

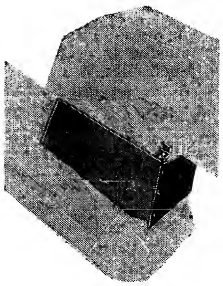
4. Postaviti lančanik na osovinu motora upotrebljavajući klin i zavrtanj za pričvršćivanje. Postaviti motor na noseće ugaonike i pričvrstiti ga zavrtnjima. Staviti pogonski lanac i zategnuti ga pomeranjem sklopa nosećih ugaonika. Najzad, pritegnuti navrtke na dugim zavrtnjima za držanje ugaonika.



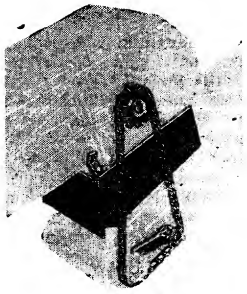
Slika 48

5. Pričvrstiti zavrtnjima noseće ploče i postaviti zaštitnike. Upotrebljavati prstenaste elastične podloške i dvostruke navrtke na zavrtnjima za vezivanje nosećih ploča.

Spajanje dva elevatora



Slika 49



Slika 50

Najpre postaviti poklopac preko otvora za izdvajanje zrna na prvoj sekciji. O tome videti uputstva na strani 11, slika 5.

Pričvrstiti zavrtnjima stranice umetka za unutrašnje ivice prve sekcije, a zadnji deo umetka za njegove bočne stranice.

Pričvrstiti vertikalne nosače na obema stranama za odlivke prve sekcije.

Pričvrstiti zavrtnjima poprečnu polugu za vezu, za vertikalne nosače, kako bi ova nosila izlaznu glavu.

Otkloniti donji čeoni lim izlazne glave.

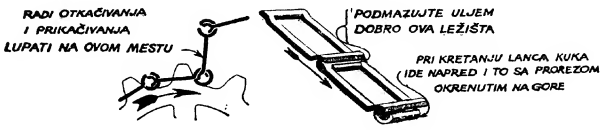
Pričvrstiti zatezač lanca za rozetu na desnoj livenoj strani prve sekcije.

Postaviti lančanik sa dvanaest zuba na osovinu izlazne glave elevatora i to tako da bude u istoj liniji sa lančanikom na osovini prve sekcije.

Na kraju postaviti pogonski lanac.

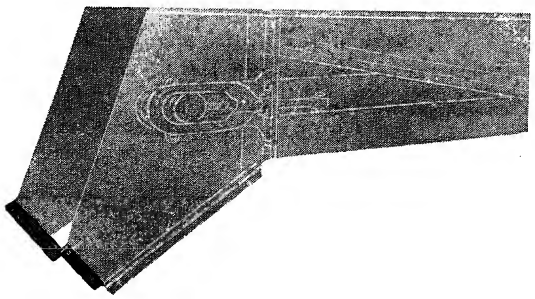
Lanci

Da bi lanci mogli da rade treba ih dovoljno zategnuti. Pri radu karike treba da budu okrenute svojom kukom u pravcu kretanja lančanika i to tako da otvor kuke (prorez za spajanje) gleda gore. Videti sliku 51.



Slika 51

Priprema elevatora za rad sa balama sena ili slame



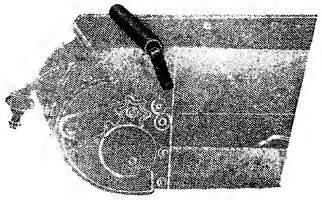
Slika 52

1. Skinuti kapu i produžetak izlazne glave, onako kako je to prikazano na slici 52.

2. Ugaonik postavljen na donjem kraju glave može biti upotrebljen za vezivanje jedne strane klizeće ravni ukoliko bi takva bila potrebna pri radu sa balama ili vrećama.

3. Ukloniti prijemni koš i postaviti valjak za pridržavanje bala na prvu sekciju, onako kako je to prikazano na slici 53.

Osim toga, obratite pažnju na uputstva data na strani 12 pod naslovom „Dizanje bala sena", kao i uputstva koja se odnose na sklapanje elevatora.



Slika 53

Brzina transportovanja

Preporučena brzina za transportovanje elevatora po dobrom putu je 15 km/sat. Na lošim putevima brzinu transportovanja treba smanjiti čak i do brzine hoda čoveka.

POGON ELEVATORA ZA KABASTU HRANU

Na osovini prijemne sekcije elevatora postavljen je lančanik sa 47 zuba za lanac 5/8 cola (15,875 mm). Prikladne brzine za dizanje sitnog zrna, kukuruza u klipu ili baliranog sena mogu se postići postavljanjem prenosnih lančanika prema sledećoj tablici:

	Materijal koji se diže	Pogon			Prenosna osovina		Osovina prijemne sekcije	
		Broj obrta u minuti	KS	Broj zuba	Broj zuba pogonjenog lančanika	Broj obrta u minuti	Broj zuba pogonskog lančanika	Pogonjeni lančanik ima zuba	Broj obrta u minuti
Elektro-motor Aż3n—4	Sitno zrno ili kukuruz u klipu	1405	3,3	13	66	275	21	47	123
	Baliran seno ili slama	1405	3,3	13	66	275	17	47	100
Benzinski motor „Savica"	Sitno zrno ili kukuruz u klipu	3000	5	13	66	600	10	47	127
	Baliran seno ili slama	3000	5	13	66	600	10	47	107

Upotreba liste delova

Radi raspoznavanja važno je zapamtiti da je tačno ime ovog elevatora „Elevator za kabastu hranu".

Perspektivni crteži sklopova na sledećim stranicama služe da pomoću njih lako nadjete bilo koji deo elevatora i njegov broj. Osim toga, ovi crteži pokazuju red sklapanja delova. Kada je neophodno rasklopiti neki sklop da bi se zamenili istrošeni delovi, crteži pomažu da se proveri tačnost ponovnog sklapanja i time obezbedi zadovoljavajući rad elevatora.

Ključ brojnog indeksa. Svaki deo ima na slici broj koji je dat samo radi lakšeg nalaženja njegovog pravog fabričnog broja, opisa i količine koja se upotrebljava. To je istovremeno redni broj specifikacije. Nemojte pomešati taj broj sa pravim brojem rezervnog dela koji je višecifren i koji Vam je potreban kod naručivanja.

Količina. Ako je potreban samo jedan komad nekog dela, onda njegova količina nije navedena u specifikaciji dotičnog sklopa. A ako se od nekog dela upotrebljava više no jedan komad, količina je prikazana u specifikaciji.

Kada naručujete rezervne delove od Industrije poljoprivrednih mašina „ZMAJ" ili njenog zastupnika, dajte za njih sledeće podatke:

a) Puno ime Vašeg elevatora, njegov tip, seriski broj i godinu izrade.

b) Broj dela, opis i količinu koja Vam je potrebna.

c) U slučajevima standardne robe koja nema brojeva, kao što su zavrtnji, navrtke, podmetači itd, dajte veličinu i broj standarda.

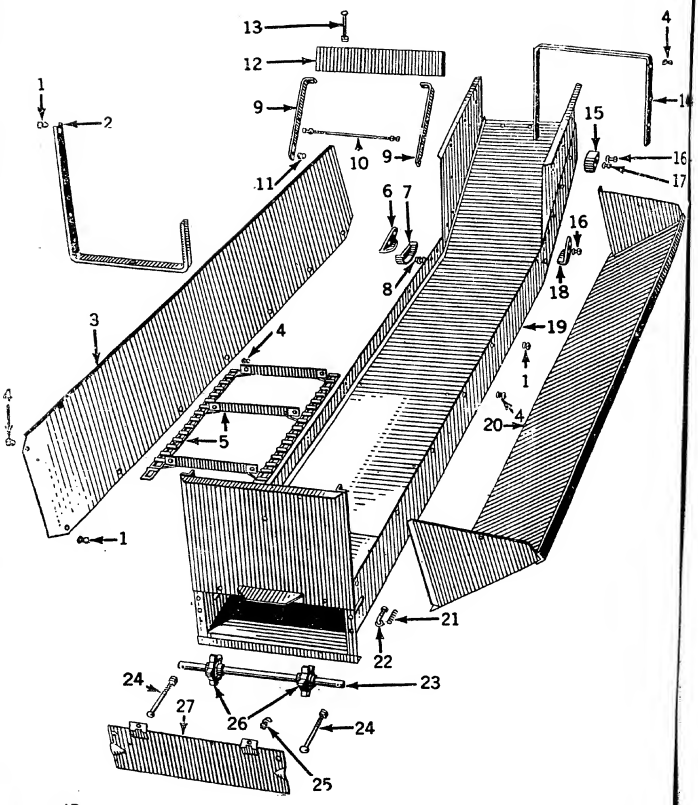
Kapacitet elevatora

Kapacitet elevatora zavisi od specifične zapremine materijala koji se diže, od visine dizanja i od brzine transportnog lanca.

Može se kao orijentaciona vrednost za kapacitet uzeti cifra od 10 tona mase za jedan sat rada.

BROJNI INDEKS DELOVA ELEVATORA

POVEĆANI PRIJEMNI KOŠ 91—1000

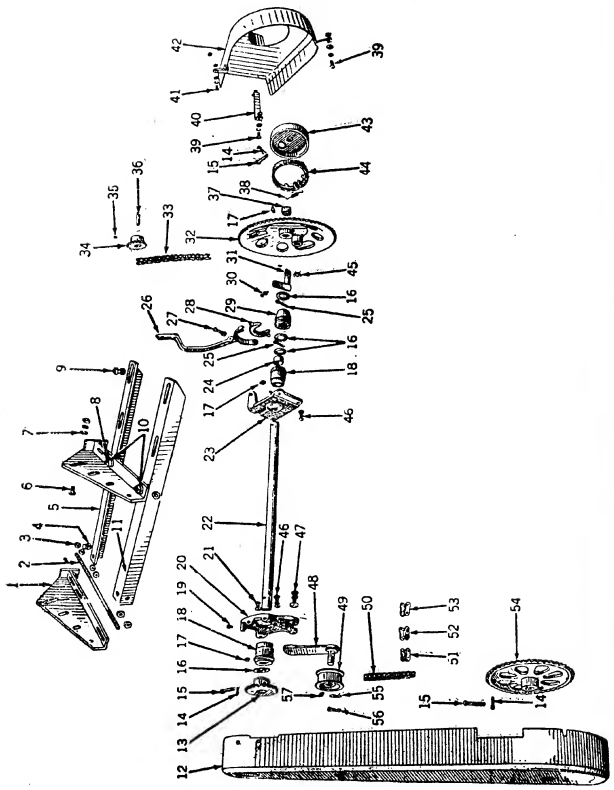


POVEĆANI PRIJEMNI KOŠ 91 — 1000

Redni broj	Broj dela ili standarda	O p i s	
1	JUS M. B1 050	Zavrtanj M 8 × 20	13 komada
	JUS M. B1 601	Navrtka M 8	13 "
	JUS M. B2 110	Prstenasta elastična podloška A8	13 "
2	91—1600	Okov korita	4 "
3	91—1001	Stranica	
4	JUS M. B1. 050	Zavrtanj M 8 × 20	5 "
	JUS M. B1. 601	Navrtka M 8	5 "
	JUS M. B2. 110	Prstenasta elastična podloška A8	5 "
5	91—1200	Transportni lanac — sklop	
	91—1201	Nosač lopatice	35+35 "
	91—1202	Lopatica	35 "
	No 55	Presovana karika lanca	490 "
	JUS M. B3. 011	Zakovica 6 × 18	70 "
6	91—1009	Vodjica lanca — leva	
7	91—1006	Vodjica lanca	1+1 "
8	JUS M. B1. 050	Zavrtanj M 8 × 20	4 "
	JUS M. B1. 601	Navrtka M 8	4 "
	JUS M. B2. 110	Prstenasta elastična podloška A8	4 "
9	91—1801	Nosač držača	2 "
10	91—1802	Specijalni zavrtanj	
	JUS M. B1. 601	Navrtka M 10	4 "
	JUS M. B2. 110	Prstenasta elast. podloška A10	2 "
11	JUS M. B1. 171	Zavrtanj M 8 × 20	2 "
	JUS M. B1. 601	Navrtka M 8	2 "
	JUS M. B2. 110	Prstenasta elastična podloška A8	2 "
12	91—1803	Ploča držača	
13	JUS M. B1. 050	Zavrtanj M 10 × 100	2 "
	JUS M. B1. 601	Navrtka M 10	2 "
	JUS M. B2. 110	Prstenasta elast. podloška A10	2 "
	JUS M. B2. 012	Ravna podloška 11,5	2 "
14	91—1007	Stremen	
15	91—1008	Vodjica lanca	6 "
16	JUS M. B1. 171	Zavrtanj M 8 × 20	12 "
17	JUS M. B1. 601	Navrtka M 8	12 "
	JUS M. B2. 110	Prstenasta elastična podloška A8	12 "
18	91—1009	Vodjica lanca — desna	
19	91—1100	Korito — sklop	
20	91—1300	Pokretna strana	
21	91—1011	Opruga	2 "
22	91—1010	Specijalni zavrtanj	2 "
	JUS M. B1. 601	Navrtka M 8	2 "
	JUS M. B2. 012	Ravna podloška 9,5	2 "
23	91—1003	Osovina	
24	91—1013	Specijalni zavrtanj	2 "
	JUS M. B1. 601	Navrtka M 10	4 "
25	JUS M. B1. 050	Zavrtanj M 6 × 15	2 "
	JUS M. B1. 601	Navrtka M 6	2 "
	JUS M. B2. 110	Prstenasta elastična podloška A6	2 "
26	91—1002	Lančanik	2 "
27	91—1400	Zadnja stranica	

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

PRENOSNA OSOVINA 91 –2000

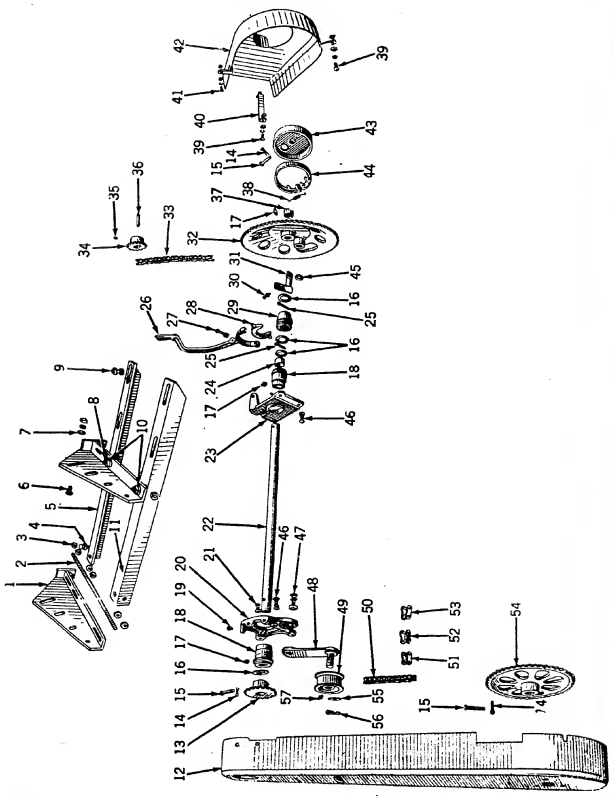


PRENOSNA OSOVINA 91 — 2000

Redni broj	Broj dela ili standarda	O p i s	
1	91—3301	Stranica	2 komada
2	91—3303	Specijalni zavrtanj	2 "
3	JUS M. B1. 601	Navrtka M 12	12 "
4	JUS M. B1. 050	Zavrtanj M 10 × 25	2 "
	JUS M. B1. 601	Navrtka M 10	2 "
	JUS M. B2. 110	Prstenasta elast. podloška A 10	2 "
5	91—3302	Ugaonik desni	
6	JUS M. B1. 171	Zavrtanj M 10 × 20	8 "
	JUS M. B1. 601	Navrtka M 10	8 "
	JUS M. B2. 110	Prstenasta elast. podloška A 10	8 "
7	JUS M. B2. 012	Ravna podloška 11,5	8 "
8	JUS M. B1. 050	Zavrtanj M 10 × 25	2 "
	JUS M. B1. 601	Navrtka M 10	2 "
9	JUS M. B1. 050	Zavrtanj M 10 × 40	4 "
	JUS M. B1. 601	Navrtka M 10	4 "
	JUS M. B2. 110	Prstenasta elast. podloška A 10	4 "
10	JUS M. B2. 013	Ravna podloška 10,5	2 "
11	91 – 3302	Ugaonik levi	
12	91—0200	Zaštitnik	
13	91—2006 a	Lančanik sa 10 zuba	
14	JUS M. B2. 300	Rascepka 3 × 15	3 "
15	91 - 2007	Svornjak	2 "
16	91—2008	Podmetač	4 "
17	DIN 3402	Mazalica M 10 × 1	3 "
18	91—2002	Ležišna čaura	
	91—2003	Ležišna kučica	2 "
19	JUS M. B1. 050	Zavrtanj M 8 × 15	3 "
	JUS M. B2. 110	Prstenasta elast. podloška A 8	3 "
20	91—2004	Okov — nosač	
21	JUS M. B1. 171	Zavrtanj M 10 × 35	2 "
	JUS M. B1. 601	Navrtka M 10	2 "
	JUS M. B2. 110	Prstenasta elast. podloška A 10	2 "
22	91—2001	Osovina	
23	91—2005	Okov — nosač	
24	91—2002	Ležišna čaura	
25	JUS M. B2. 300	Rascepka 6 × 40	2 "
26	91—2011	Ručica	
27	JUS M. B1. 050	Zavrtanj M 10 × 45	
	JUS M. B1. 601	Navrtka M 10	2 "
28	91—2010	Uzengija	
29	91—2009	Konusna vodjica	
30	JUS M. B1. 054	Zavrtanj M 6 × 30	

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

PRENOSNA OSOVINA 91—2000

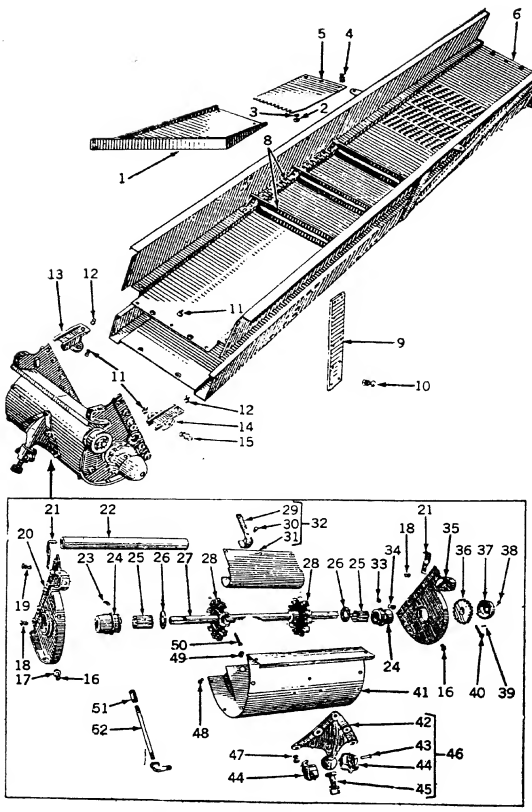


PRENOSNA OSOVINA 91—2000

Redni broj	Broj dela ili standarda	O p i s	
	JUS M. B1. 601	Navrtka M 6	
31	91—2100	Komanda kočnice — sklop	
32	91—2012	Lančanik	
33	5/8"	Pogonski lanac	107 članaka
34	91—0011	Lančanik	
35	JUS M. B1. 070	Zavrtanj M 10 × 15	
36	91—0011	Normalni ravni klin	
37	91—2013	Čaura	
38	91—2016	Opruga	
39	JUS M. B1. 050	Zavrtanj M 10 × 30	2 komada
	JUS M. B1. 601	Navrtka M 10	4 "
	JUS M. B2. 110	Prstenasta elast. podloška A 10	2 "
40	91—0309	Veza zaštitnika	
41	JUS M. B1. 050	Zavrtanj M 10 × 15	
	JUS M. B1. 601	Navrtka M 10	2 "
42	91—0300	Zaštitnik	
43	91—2014	Poklopac spojnice	
44	91—2015	Prsten spojnice	
45	DIN 471	Osiguravajući prsten Sg 25 × 1,3	
46	JUS M. B1. 171	Zavrtanj M 10 × 30	2 "
	JUS M. B1. 601	Navrtka M 10	2 "
	JUS M. B2. 110	Prstenasta elast. podloška A 10	2 "
47	JUS M. B1. 171	Zavrtanj M 12 × 35	
	JUS M. B1. 601	Navrtka M 12	
	JUS M. B2. 110	Prstenasta elast. podloška A 12	
48	91—3551	Nosač točka	
49	91—3552	Točak	
50	5/8"	Pogonski lanac	133 članka
51	5/8"	Članak	
52	5/8"	Članak za vezu — ženski	
53	5/8"	Članak za vezu — muški	
54	91—3010	Lančanik	
55	JUS M. B2. 013	Ravna podloška 21	2 komada
56	JUS M. B2. 300	Rascepka 4 × 30	
57	DIN 3402	Mazalica M 10 × 1	

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

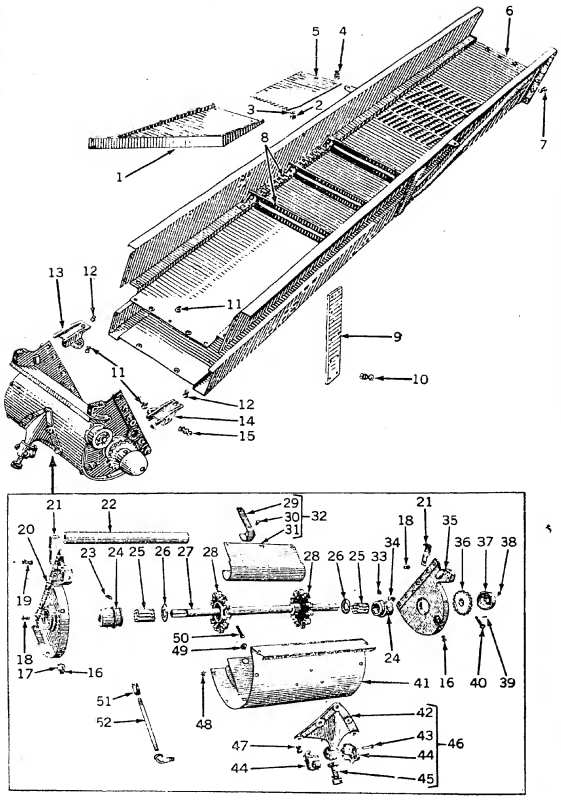
PRVA SEKCIJA 91—3000



PRVA SEKCIJA 91—3000

Redni broj	Broj dela ili standarda	O p i s	
1	91—3109	Korito za izdvajanje zrna	
2	JUS M. B1. 601	Navrtka M 5	2 komada
3	JUS M. B2. 012	Ravna podloška 5,3	2 "
4	JUS M. B1. 171	Zavrtanj M 8 × 15	3 "
	JUS M. B1. 601	Navrtka M 8	3 "
	JUS M. B2. 110	Prstenasta elastična podloška A 8	3 "
5	91—3108	Lim za zatvaranje rupa na sekciji	
6	91—3100	Prva sekcija — sklop	
7	JUS M. B1. 050	Zavrtanj M 16 × 35	12 "
	JUS M. B1. 601	Navrtka M 16	12 "
	JUS M. B2. 110	Prstenasta elast. podloška A 16	12 "
8	91—3651	Lopatica	13 "
	№ 55	Presovane karike lanca	230 "
9	91—3107	Nosač	2 "
10	JUS M. B1. 171	Zavrtanj M 10 × 25	14 "
	JUS M. B1. 601	Navrtka M 10	14 "
	JUS M. B2. 110	Prstenasta elast. podloška A 10	14 "
11	JUS M. B1. 171	Zavrtanj M 8 × 20	3 "
	JUS M. B1. 601	Navrtka M 8	3 "
	JUS M. B2. 110	Prstenasta elast. podloška A 8	3 "
12	JUS M. B1. 050	Zavrtanj M 8 × 20	2 "
	JUS M B1. 601	Navrtka M 8	2 "
	JUS M. B2 110	Prstenasta elast. podloška A 8	2 "
13	91—3004	Klizač — levi	
14	91—3004	Klizač — desni	
15	JUS M. B1. 050	Zavrtanj M 8 × 30	2 "
	JUS M. B1. 601	Navrtka M 8	2 "
	JUS M. B2. 110	Prstenasta elast. podloška A 8	2 "
16	JUS M. B1. 160	Zavrtanj M 8 × 20	4 "
	JUS M. B1. 601	Navrtka M 8	4 "
	JUS M. B2. 110	Prstenasta elast. podloška A 8	4 "
17	JUS M. B2. 012	Ravna podloška 9,5	2 "
18	JUS M. B1. 171	Zavrtanj M 10 × 20	10 "
	JUS M. B1. 601	Navrtka M 10	10 "
	JUS M. B2. 110	Prstenasta elast. podloška A 10	10 "
19	JUS M. B1. 171	Zavrtanj M 10 × 25	12 "
	JUS M. B1. 601	Navrtka M 10	2 "
	JUS M. B2 110	Prstenasta elast. podloška A 10	2 "
20	91—3002	Levi nosač	
21	91—3007	Nosač	2 "
22	91—0050	Cev	
23	DIN 3402	Mazalica M 10 × 1	
24	91—3201	Ležišna kučica	2 "
25	Balzer MB 4	Ležište sa dugim valjcima	2 "

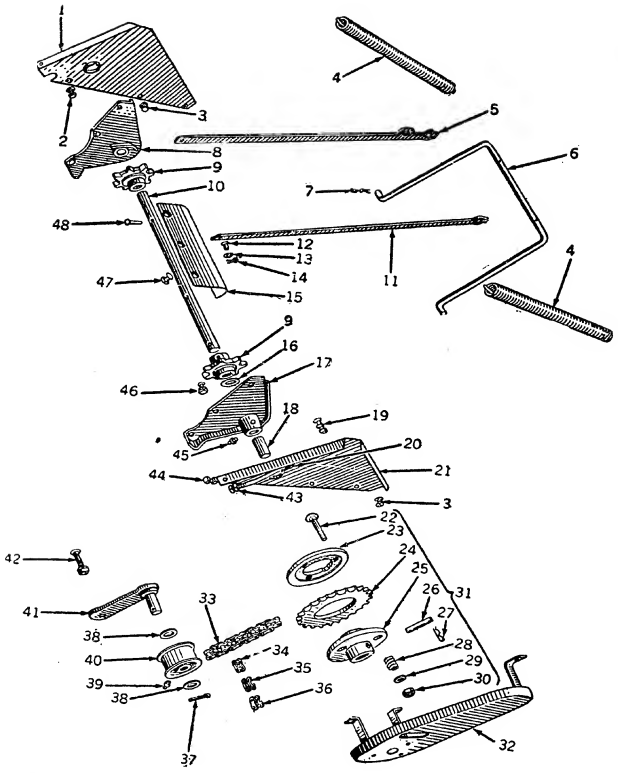
Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.



Redni broj	Broj dela ili standarda	O p i s	
26	91—3020	Podmetač	2 komada
27	91—3012	Osovina	
28	91—3013	Lančanik	2 „
29	91—3701	Nosač	
30	JUS M. B3. 011	Zakovica 8 × 12	2 „
31	91—3702	Lim	
32	91—3700	Štit za vezu patosa — sklop	
33	DIN 3402	Mazalica M 10 × 1	
34	91—3201	Ležišna kućica	
35	91—3001	Desni nosač	
36	91—3014	Lančanik	
37	91—3015	Štit	
38	JUS M. B1. 091	Zavrtanj M 6 × 20	
39	JUS M. B2. 300	Rascepka 2 × 12	
40	91—3005	Svornjak	
41	91—3003	Lim	
42	91—3502	Nosač	
43	JUS M. B1. 050	Zavrtanj M 8 × 25	4 „
	JUS M. B1. 601	Navrtka M 8	4 „
	JUS M. B2. 013	Ravni podmetač ∅ 8,4	4 „
44	91—3502	Zglob	2 „
45	91—3504	Zavrtanj	
	JUS M. B1. 601	Navrtka M 16	
	JUS M. B2. 110	Prstenasta elast. podloška A 16	
46	91—3500	Poteznica	
47	JUS M. B1. 050	Zavrtanj M 10 × 30	5 „
	JUS M. B1. 601	Navrtka M 10	5 „
	JUS M B2 110	Prstenasta elast. podloška A 10	5 „
48	JUS M. B1. 160	Zavrtanj M 6 × 20	5 „
	JUS M. B1. 601	Navrtka M 6	5 „
	JUS M. B2. 110	Prstenasta elast. podloška A 6	5 „
49	JUS M. B1. 050	Zavrtanj M 8 × 15	2 „
	JUS M. B1. 601	Navrtka M 8	2 „
	JUS M. B2. 110	Prstenasta elast. podloška A 8	2 „
50	91—3011	Svornjak	2 „
51	DIN 3402	Mazalica M 10 × 1	
52	91—3202	Cev	2 „

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

VEZA PRIJEMNOG KOŠA I PRVE SEKCIJE 91— 3400

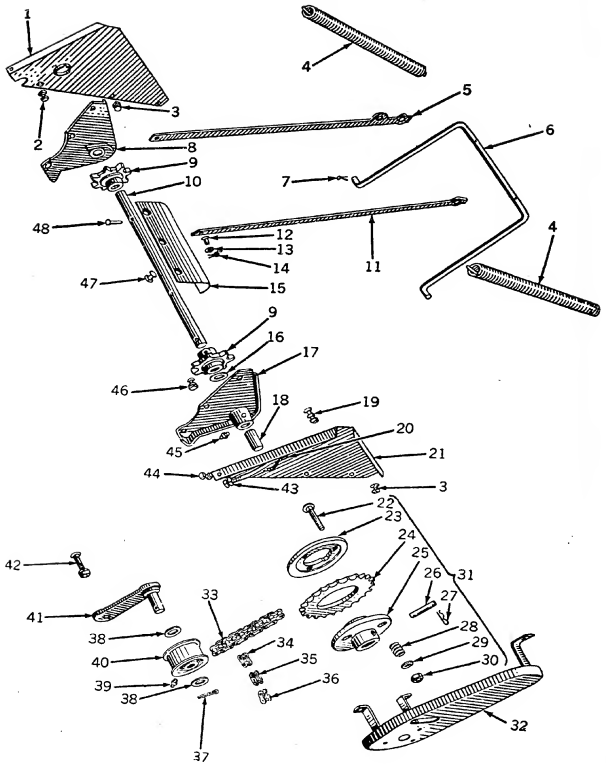


VEZA PRIJEMNOG KOŠA I PRVE SEKCIJE 91—3400

Redni broj	Broj dela ili standarda	O p i s	
1	91—3019	Noseći lim — levi	2 komada
2	JUS M. B1. 171	Zavrtanj M 10 × 20	2 "
	JUS M. B1. 601	Navrtka M 10	2 "
	JUS M. B2. 110	Prstenasta elast. podloška A 10	2 "
3	JUS M. B1. 160	Zavrtanj M 8 × 20	4 "
	JUS M. B1. 601	Navrtka M 8	4 "
	JUS M. B2. 110	Prstenasta elast. podloška A 8	4 "
4	91—3403	Opruga	2 "
5	91—3402	Veza	
6	91—3401	Uzengija	
7	JUS M. B2. 300	Rascepka 4 × 30	4 "
8	91—1500	Glavni okov sa ležištem — levi	
9	91—3017	Lančanik	2 "
10	91—3016	Osovina	
11	91—3402	Veza	
12	91—3404	Svornjak	2 "
13	JUS M. B2. 013	Ravna podloška 10,5	2 "
14	JUS M. B2. 300	Rascepka 3 × 15	2 "
15	91—1106	Zaštitnik	
16	91—3020	Otstojni prsten	2 "
17	91—1500	Glavni okov — desni	
18	91—1504	Ležišna čaura	2 "
19	JUS. M. B1. 050	Zavrtanj M 6 × 20	2 "
20	JUS. M. B1. 601	Navrtka M 6	2 "
	JUS. M. B2. 110	Prstenasta elast. podloška A 6	2 "
21	91—3019	Noseći lim — desni	
22	JUS. M. B1. 050	Zavrtanj M 8 × 75	3 "
23	91—3602	Prednja ploča	
24	91—3601	Lančanik 27 zuba (za klip. kukur.)	
	91—3601a	Lančanik 25 zuba (za sitno zrno)	
25	91—3603	Zadnja ploča	
26	91—3009	Svornjak	
27	JUS. M. B2. 300	Rascepka 3 × 15	
28	91—3604	Opruga	3 "
29	JUS. M. B2. 012	Ravna podloška 9,5	3 "
30	JUS. M. B1. 601	Navrtka M 8	3 "
31	91—3600	Lančanik sa spojnicom — sklop	
32	91—0100	Zaštitnik	
33	5/8"	Galov lanac	62 članka
34	5/8"	Članak Galovog lanca	60 komada
35	5/8"	Članak za vezu — ženski	
36	5/8"	Članak za vezu — muški	

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

VEZA PRIJEMNOG KOŠA I PRVE SEKCIJE 91—3400

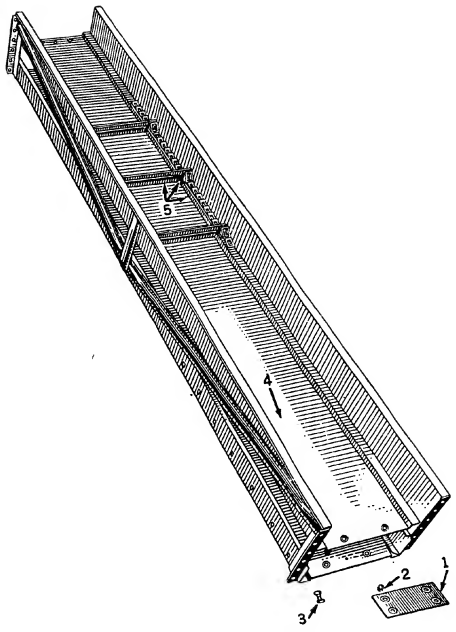


VEZA PRIJEMNOG KOŠA I PRVE SEKCIJE 91—3400

Redni broj	Broj dela ili standarda	O p i s	
37	JUS M. B2. 300	Rascepka 4 × 30	
38	JUS M. B2. 013	Ravna podloška 21	2 komada
39	DIN 3402	Mazalica M 10 × 1	
40	91—3552	Točak	
41	91—3551	Nosač točka	
42	JUS M. B1. 171	Zavrtanj M 16 × 60	
	JUS M. B1. 601	Navrtka M 16	
	JUS M. B2. 011	Ravna podloška 17	
43	91—3008	Specijalni zavrtanj	2 „
44	JUS M. B1. 160	Zavrtanj M 8 × 20	2 „
	JUS M. B1. 601	Navrtka M 8	2 „
	JUS M. B2. 110	Prstenasta elast. podloška A 8	2 „
45	DIN 3402	Mazalica M 10 × 1	2 „
46	JUS. M. B1. 171	Zavrtanj M 8 × 20	4 „
	JUS. M. B1. 601	Navrtka M 8	4 „
	JUS. M. B2. 110	Prstenasta elast. podloška A 8	4 „
47	JUS. M. B1. 171	Zavrtanj M 8 × 15	3 „
	JUS. M. B1. 601	Navrtka M 8	3 „
	JUS. M. B2. 110	Prstenasta elast. podloška A 8	3 „
48	91—3011	Svornjak	2 „

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

SREDNJA SEKCIJA 91—4000

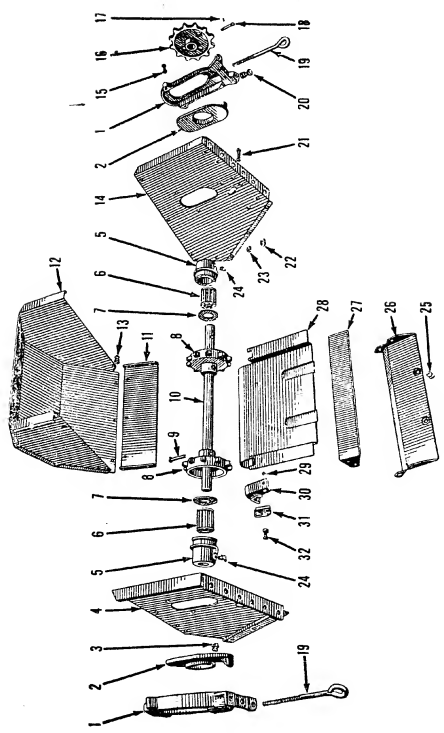


SREDNJA SEKCIJA 91 — 4000

Redni broj	Broj dela ili standarda	O p i s	
1	91—0001	Lim za vezu sekcija	2 komada
2	JUS M. B1. 171	Zavrtanj M 8 × 20	8 „
	JUS M. B1. 601	Navrtka M 8	8 „
	JUS M B2. 110	Prstenasta elastična podloška A 8	8 „
3	JUS M. B1. 171	Zavrtanj M 16 × 35	12 „
	JUS M. B1. 601	Navrtka M 16	12 „
	JUS M. B2. 110	Prstenasta elast. podloška A 16	12 „
4	91—4000	Srednja sekcija — sklop	
5	91—3651	Lopatica	13 „
	91—3652	Okov	26 „
	No. 55	Presovane karike lanca	230 „

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

IZLAZNA GLAVA 91—5100

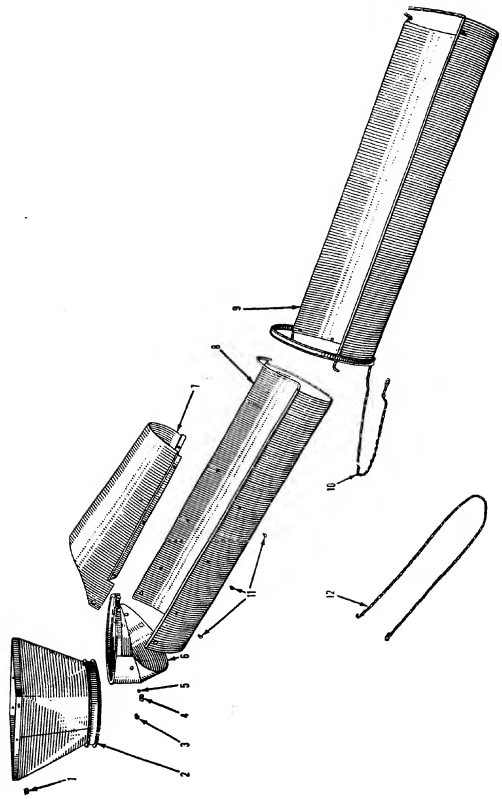


IZLAZNA GLAVA 91 — 5100

Redni broj	Broj dela ili standarda	O p i s	
1	91—5103	Nosač	2 komada
2	91—5112	Umetak	2 „
3	JUS M. B1. 171	Zavrtanj M 8 × 15	4 „
	JUS M. B1. 601	Navrtka M 8	4 „
	JUS M. B2. 110	Prstenasta elastična podloška A 8	4 „
4	91—5101	Stranica-leva	
5	91—5111	Kućište ležišta	2 „
6	Balzer MB4	Ležište sa dugačkim valjcima	2 „
7	91—5110	Podloška	2 „
8	91—5108	Lančanik	2 „
9	91—5109	Svornjak	2 „
10	91—5107	Osovina	
11	91—5106	Lim	
12	91—5120	Poklopac — sklop	
13	JUS M. B1. 171	Zavrtanj M 6 × 15	9 „
	JUS M. B1. 601	Navrtka M 6	9 „
	JUS M. B2. 110	Prstenasta elastična podloška A 6	9 „
14	91—5101	Stranica-desna	
15	JUS. M. B1. 171	Zavrtanj M 8 × 40	4 „
	JUS M. B1. 601	Navrtka M 8	4 „
	JUS M. B2. 110	Prstenasta elastična podloška A 8	4 „
16	91—C060	Lančanik (upotrebljava se samo kada se spajaju dva elevatora)	
17	JUS M. B2. 300	Rascepka 3 × 25	
18	91—5109	Svornjak	
19	91—5104	Zavrtanj za pritezanje	2 „
20	JUS M. B1. 171	Zavrtanj M 16 × 40	4 „
	JUS M. B1. 601	Navrtka M 16	4 „
	JUS M. B2. 110	Prstenasta elast. podloška A 16	4 „
21	JUS M. B1. 171	Zavrtanj M 8 × 55	4 „
	JUS M. B1. 601	Navrtka M 8	4 „
	JUS M. B2. 110	Prstenasta elast. podloška A 8	4 „
22	JUS M. B1. 160	Zavrtanj M 6 × 12	4 „
23	JUS M. B1. 601	Navrtka M 6	4 „
	JUS M. B2. 110	Prstenasta elast. podloška A 6	4 „
24	DIN 3402	Mazalica M 10 × 1	2 „
25	JUS M. B1. 171	Zavrtanj M 8 × 15	2 „
	JUS M. B1. 601	Navrtka M 8	2 „
	JUS M B2. 110	Prstenasta elast. podloška A 8	2 „
26	91—5134	Zaštitni lim	
27	91—5105	Ukrućenje	
28	91—5131	Zaštitni lim	
29	JUS M B3. 014	Zakovica 5 × 15	2 „
30	91—5133	Poluležaj	2 „
31	91—5132	Poluležaj	2 „
32	JUS M. B1. 050	Zavrtanj M 8 × 20	2 „
	JUS. M. B1 601	Navrtka M 8	2 „
	JUS. M. B2. 110	Prstenasta elastična podloška A 8	2 „

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

PRODUŽETAK IZLAZNE GLAVE 91 - 5200, 91—5300, 91—5400, i 91—5500

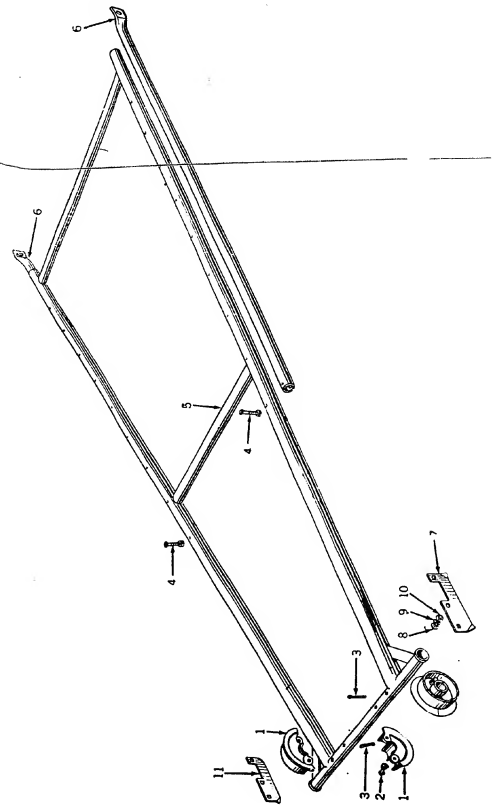


PRODUŽETAK IZLAZNE GLAVE 91—5200, 91—5300, 91—5400 i 91—5500

Redni broj	Broj dela ili sklopa	O p i s	
1	JUS M. B1. 160	Zavrtanj M 6 × 12	11 komada
	JUS M. B1. 601	Navrtka M 6	11 „
	JUS M. B2. 110	Prstenasta elast. podloška A 6	11 „
2	91—5200	Produžetak izlazne glave—sklop	
3	JUS M. B1 050	Zavrtanj M 6 × 20	
	JUS M. B1. 601	Navrtka M 6	
	JUS M. B2. 110	Prstenasta elast. podloška A 6	
4	JUS M. B1. 160	Zavrtanj M 8 × 15	2 „
	JUS M. B1. 601	Navrtka M 8	2 „
	JUS M. B2. 110	Prstenasta elast. podloška A 8	2 „
5	91—5205	Cev	2 „
6	91—5300	Koleno — sklop	
7	91—5403	Poklopac	
8	91—5401	Korito	
9	91—5500	Produžetak korita — sklop	
10	Art. 201	Lanac „ploske", 10 × 22, sa karabinerom	1,5 m dug
11	JUS M. B1. 160	Zavrtanj M 6 × 15	8 komada
	JUS M. B1. 601	Navrtka M 6	8 „
12	JUS M. B2. 110	Prstenasta elastična podloška A 6	8 „
	Art. 201	Lanac „ploske", karike 10 × 22 sa S kukama	1,65 m dug

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

TELESKOPSKI NOSEĆI RAM, POKRETNI DEO 91—6100

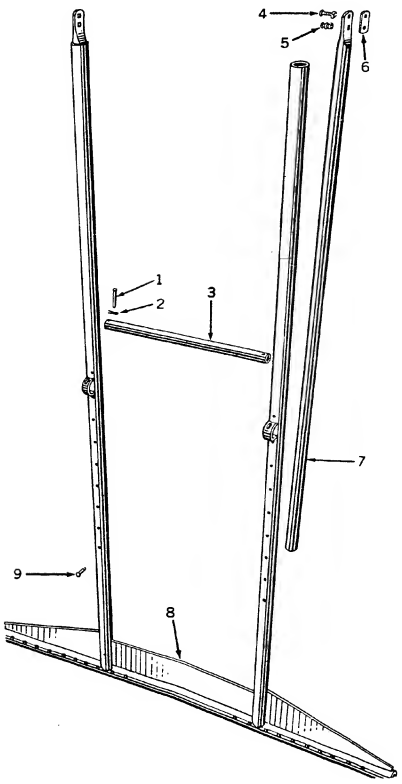


TELESKOPSKI NOSEĆI RAM, POKRETNI DEO 91 — 6100

Red. broj	Broj dela ili standarda	O p i s	
1	91—7104	Točak — polovina	4 komada
2	JUS M. B1. 050	Zavrtanj M 10 × 50	4 „
	JUS M. B1. 601	Navrtka M 10	4 „
	JUS M. B2. 110	Prstenasta elast. podloška A 10	4 „
3	JUS M. B2. 300	Rascepka 6 × 55	2 „
4	JUS M. B1. 050	Zavrtanj M 12 × 75	2 „
	JUS M. B1. 601	Navrtka M 12	2 „
	JUS M. B2. 110	Prstenasta elast. podloška A 12	2 „
5	91—6100	Pokretni deo — sklop	2 „
6	91—6002	Cev	
7	91—0002	Vodjica leva	6 „
8	JUS M. B1. 171	Zavrtanj M 10 × 20	6 „
9	JUS M. B2. 110	Prstenasta elast. podloška A 10	6 „
10	JUS M. B1. 601	Navrtka M 10	6 „
11	91—0003	Vodjica, desna	

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

SREDNJI DEO TELESKOPSKOG NOSEĆEG RAMA 91—6200

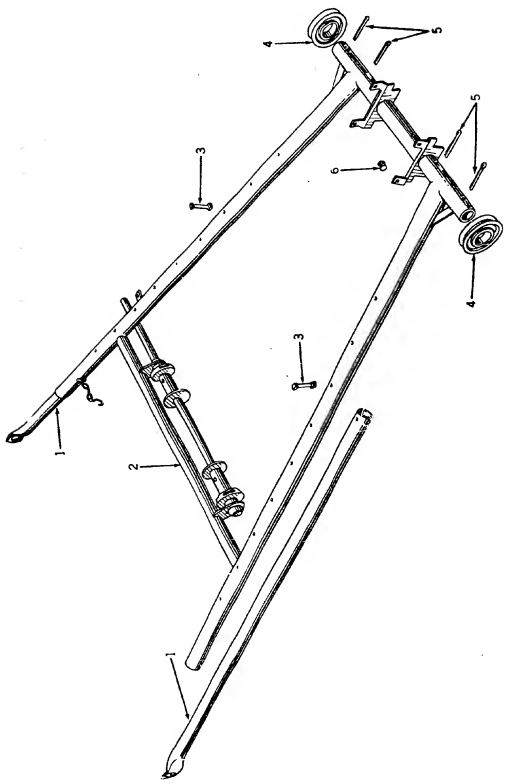


SREDNJI DEO TELESKOPSKOG NOSEĆEG RAMA 91—6200

Redni broj	Broj dela ili standarda	O p i s	
1	91—6207	Svornjak	2 komada
2	JUS M. B2. 300	Rascepka 2 × 12	2 „
3	91—6203	Cev	
4	JUS M. B1. 050	Zavrtanj M 8 × 20	4 „
5	JUS M. B1. 601	Navrtka M 8	4 „
	JUS M. B2. 110	Prstenasta elast. podloška A 8	4 „
6	91—6004	Stezač	2 „
7	91—6003	Cev	2 „
8	91—6200	Srednji deo — sklop	
9	JUS M. B1. 050	Zavrtanj M 12 × 75	2 „
	JUS M. B1. 601	Navrtka M 12	2 „
	JUS M. B2. 110	Prstenasta elast. podloška A 12	2 „

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

TELESKOPSKI NOSEĆI RAM, NEPOKRETNI DEO 91—6300

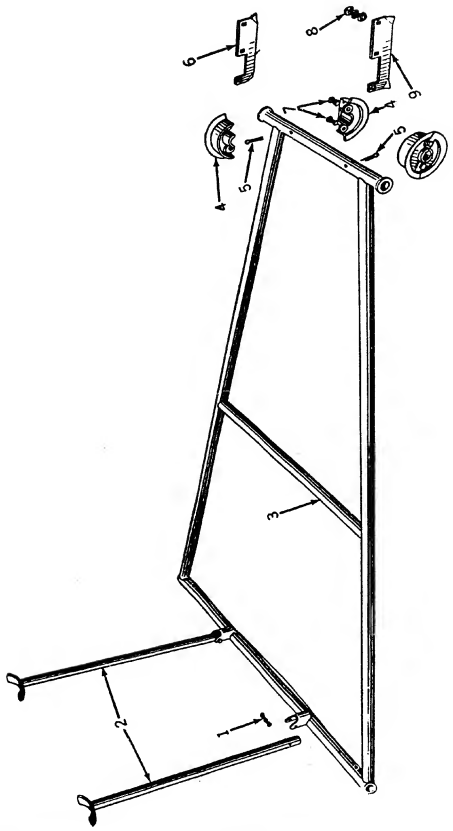


TELESKOPSKI NOSEĆI RAM, NEPOKRETNI DEO 91—6300

Redni broj	Broj dela ili standarda	O p i s	
1	91—6001	Cev — produžna	2 komada
2	91—6300	Nepokretni deo — sklop	
3	JUS M. B1. 050	Zavrtanj M 12 × 75	2 „
	JUS M. B1. 601	Navrtka M 12	2 „
	JUS M. B2. 110	Prstenasta elast. podloška A 12	2 „
4	91—7204	Točak	2 „
5	JUS M. B2. 300	Rascepka 6 × 65	6 „
6	JUS M. B1. 171	Zavrtanj M 10 × 20	4 „
	JUS M. B1. 601	Navrtka M 10	4 „
	JUS M. B2. 110	Prstenasta elast. podloška A 10	4 „

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

KRATKI NOSEĆI RAM, POKRETNI DEO 91—71 0

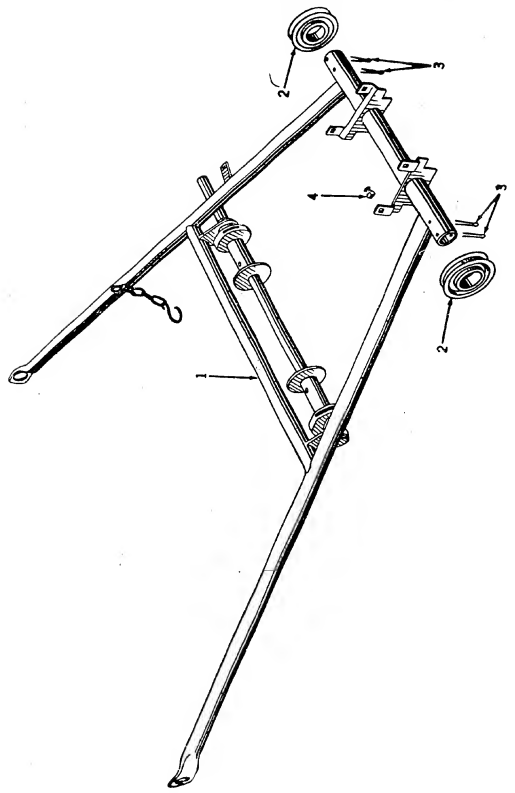


KRATKI NOSEĆI RAM, POKRETNI DEO 91—7100

Redni broj	Broj dela ili standarda	O p i s	
1	JUS M. B1. 050	Zavrtanj M 16 × 85	2 komada
	JUS M. B1. 601	Navrtka M 16	2 „
	JUS M. B2. 012	Ravna podloška 18	2 „
2	91—7300	Katarka	2 „
3	91—7100	Pokretni deo rama — sklop	
4	91—7104	Točak — polovina	4 „
5	JUS M. B2. 300	Rasc pka 6 × 65	2 „
6	91—0002	Vodjica leva	
7	JUS M. B1. 050	Zavrta·j M 10 × 50	4 „
	JUS M. B1. 601	Navrtka M 10	4 „
	JUS M B2. 013	Ravna podloška 10,5	4 „
8	JUS M. B1 171	Zavrtanj M 10 × 20	6 „
	JUS M. B1. 601	Navrtka M 10	6 „
	JUS M B2. 110	Prstenasta elast. podloška A 10	6 „
9	91—0003	Vodjica desna	

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

KRATKI NOSEĆI RAM, NEPOKRETNI DEO 91—7200

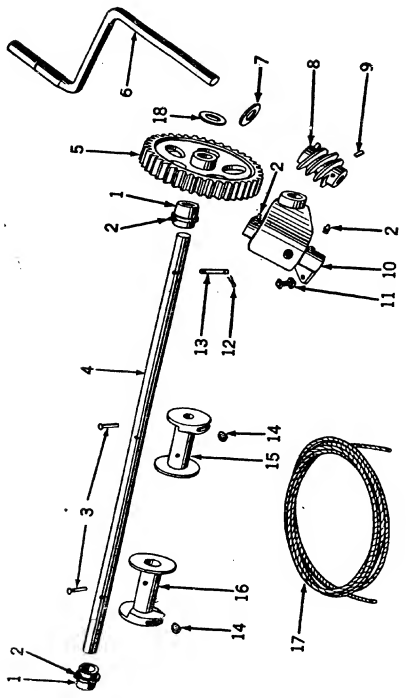


KRATKI NOSEĆI RAM, NEPOKRETNI DEO 91 — 7.00

Redni broj	Broj dela ili standarda	O p i s	
1	91—7200	Kratki noseći ram — nepokretni deo, sklop	
2	91—7201	Točak	2 komada
3	JUS M. B2. 300	Rascepka 6 × 65	4 „
4	JUS M. B1. 050	Zavrtanj M 10 × 15	4 „
	JUS M. B1. 601	Navrtka M 10	4 „
	JUS M. B2. 110	Prstenasta elast. podloška A 10	4 „

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

POGON ČELIČNOG UŽETA ZA PODIZANJE ELEVATORA 91—7400



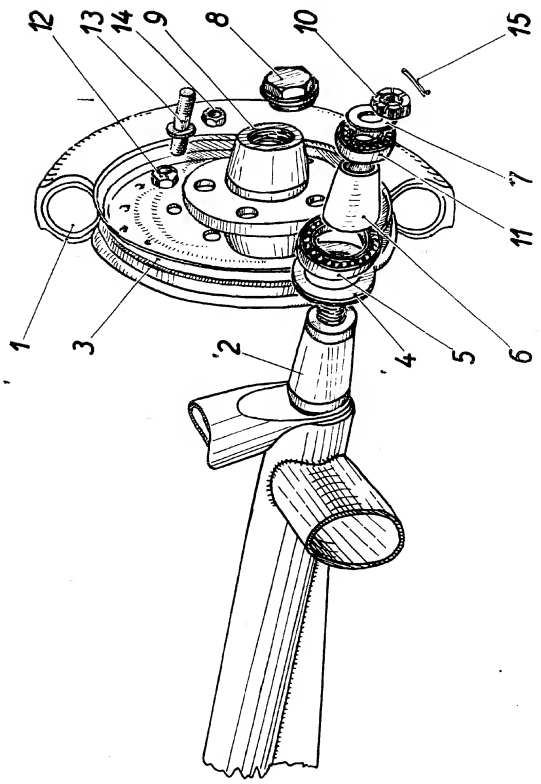
POGON ČELIČNOG UŽETA ZA PODIZANJE ELEVATORA 91—7400

Redni broj	Broj dela ili standarda	O p i s	
1	91—7403	Kućica ležišta	2 komada
	91—7405	Ležišna čaura	2 „
2	DIN 3402	Mazalica M 10 × 1	6 „
3	JUS M. B3. 023	Zakovica 10 × 75	2 „
4	91—7401	Osovina	
5	91—7408	Zupčanik	
6	91—7409	Ručica	
7	JUS M. B2. 012	Ravna podloška 23	
8	91—7407	Puž	
9	JUS M. B1. 091	Zavrtanj M 8 × 25	
10	91—7404	Kućište pužastog prenosa	
11	JUS M. B1. 050	Zavrtanj M 10 × 30	
	JUS M. B1. 601	Navrtka M 10	
	JUS M. B2. 110	Prstenasta elast. podloška A 10	
12	JUS M. B2. 300	Rascepka 3 × 25	2 „
13	91—7411	Svornjak	2 „
14	91—7412	Klin za pričvršćivanje užeta	2 „
15	91—7402	Kalem desni	
16	91—7402	Kalem levi	
17		Čelično uže ∅ 8 mm × 25 m. ili	
		čelično uže ∅ 6,5 mm × 12 m.	
18	JUS M. B2. 013	Ravni podmetač 33	Koliko je potreb.

Napomena: Čelično uže ∅ 8 mm × 25 m. dolazi na elevatore tipa C i D dok uže ∅ 6,6 mm × 12 m. dolazi na elevatore tipa A i B.

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

TOČAK I OSOVINA 91—7500

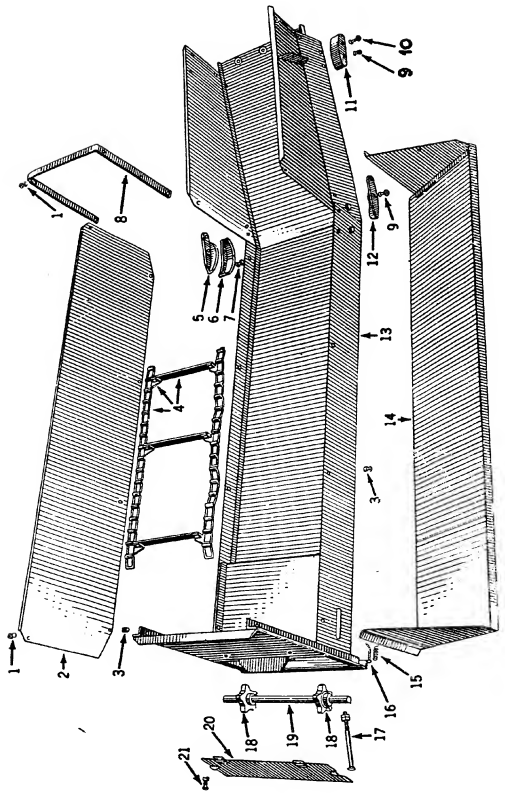


TOČAK I OSOVINA 91—7500

Redni broj	Broj dela ili standarda	Opis	
1	6 × 16"	Spoljašnja guma	2 komada
	6 × 16"	Unutrašnja guma	2 „
2	91—7507	Poluosovina	2 „
3	91—7510	Bandaž	2 „
4	91—7509	Zaptivni prsten	2 „
5	SKF 6307	Kuglični ležaj	2 „
6	91—7505	Distantna cev	2 „
7	JUS M. B2. 012	Podložna pločica	2 „
8	91—7508	Poklopac glavčine	2 „
9	91—7504	Glavčina	2 „
10	91—7506	Navrtka	2 „
11	SKF 6205	Kuglični ležaj	2 „
12	91—7502	Navrtka	10 „
13	91—7503	Zavrtanj	10 „
14	91—7501	Navrtka	10 „
15	JUS M B2. 300	Rascepka 4 × 40	2 „

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

NORMALNI PRIJEMNI KOŠ 91—8000



NORMALNI PRIJEMNI KOŠ 91—8000

Redni broj	Broj dela ili standarda	O p i s	
1	JUS M. B1. 050	Zavrtanj M 8 × 15	3 komada
	JUS M. B1. 601	Navrtka M 8	3 „
	JUS M. B2. 110	Prstenasta elast. podloška A 8	3 „
2	91—8001	Stranica	
3	JUS M. B1. 050	Zavrtanj M 6 × 15	24 „
	JUS M. B1. 601	Navrtka M 6	24 „
	JUS M. B2. 110	Prstenasta elast. podloška A 6	24 „
4	No. 55	Presovana karika lanca	280 „
	91—1202	Lopatica	20 „
	91—1201	Nosač lopatice	20+20 „
5	91—1009	Vodjica	
6	91—1006	Vodjica	2 „
7	JUS M. B1. 050	Zavrtanj M 8 × 20	4 „
	JUS M. B1. 601	Navrtka M 8	4 „
	JUS M. B2. 110	Prstenasta elast. podloška A 8	4 „
8	91—1007	Stremen	
9	JUS M. B1. 171	Zavrtanj M 8 × 20	6 „
	JUS M. B1. 601	Navrtka M 8	6 „
	JUS M. B2. 110	Prstenasta elast. podloška A 8	6 „
10	JUS M. B1. 171	Zavrtanj M 8 × 25	2 „
	JUS M. B1. 601	Navrtka M 8	2 „
	JUS M. B2. 110	Prstenasta elast. podloška A 8	2 „
11	91—1008	Vodjica	2 „
12	91—1009	Vodjica	
13	91—8100	Korito	
14	91—8300	Pokretna stran. sa graničnicima	
15	91—1011	Opruga	2 „
16	91—1010	Zavrtanj	2 „
	JUS M. B1. 601	Navrtka M 8	2 „
	JUS M. B2. 013	Ravna podloška 8,4	2 „
17	91—1013	Zavrtanj	2 „
	JUS M. B1. 601	Navrtka M 10	4 „
18	91—1002	Lančanik	2 „
19	91—1003	Osovina	
20	91—1404	Poklopac	
	ART. 209	Šarnir „ORIJENT"	2 „
21	JUS M. B1. 050	Zavrtanj M 6 × 15	6 „
	JUS M. B1. 601	Navrtka M 6	6 „
	JUS M. B2. 110	Prstenasta elast. podloška A 6	6 „

Ukoliko nije drukčije naglašeno, ovom sklopu pripada samo po jedan komad navedene pozicije.

elevator

ZA KABASTU HRANU

ZMAJ

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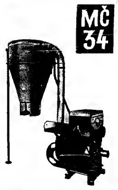
MČ 34

MLIN ČEKIĆAR MČ-34

Služi za prekrupu stočne hrane. Melje industrisku papriku, grudvasti materijal-kreč i veštačko đubrivo. Ima 100 komada ietećih čekića. Pogonska snaga 15—20 KS, učinak na sat 1500 kg. sa sitom od 3 mm. Broj okretaja u minutu 3.000. Težina 260 kg.

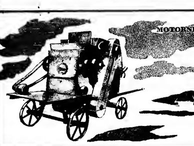


MČ 14

MLIN ČEKIĆAR MČ-14

Namenjen je za manja poljoprivredna gazdinstva. Priprema i sitni stočnu hranu. Ima 32 komada fiksiranih čekića. Potrebna pogonska snaga 6—7 KS. Kapacitet [illegible] sa sitom od 5 [illegible] okretaja 3100 u minutu.

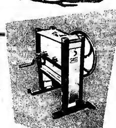
MOTORNI KRUNJAČ KUKURUZA



Mašina velikog kapaciteta za veća poljoprivredna gazdinstva. Čelične je konstrukcije sa limenom oplatom. Odvaja 100% zrna od kočanjke bez lomljenja zrna. Učinak na sat 1.700 kg., broj okretaja glavne osovine 3.500 u minutu. Pogonska snaga 5 KS, težina 500 kg.

DVOREDNA SEJALICA ZA KUKURUZ

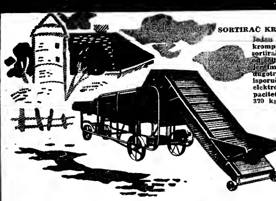
Namenjena je za setvu kukurnza u redove i na odžake sa jednakim stalnim rastojanjem između redova i odžaka. Izrađena je od čelika i livenog gvožđa. Težina 70 kg. Razmak redova 50—70 cm, razmak odžaka 65 cm.



RUČNI KRUNJAČ KUKURUZA

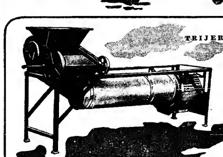
U pogledu konstrukcije izrađujemo dva tipa sa metalnom i drvenom oplatom. Poseduje teg za regulaciju, koji omogućuje da se krnne razne vrste i veličine klipova.

NABAVITE NA VREME REZERVNE DELOVE KOJE IZRAĐUJEMO ZA SVE NAŠE PROIZVODE



SORTIRAČ KROMPIRA

Jedan od važnih poslova sortiranja krompira obavlja sa uspehom naš sortirač krompira. Izrađen je sav od čelika i lima. Lak je i pokretljiv, jer ima 4 točka, pouzdan u radu i dugotrajan. Po želji kupca fabrika isporučuje sortirač sa ugrađenim elektromotorom od 0,5—1 KS. Kapacitet 5—6000 kg. na sat. Težina 370 kg. Pogonska snaga 0,5—1 KS.

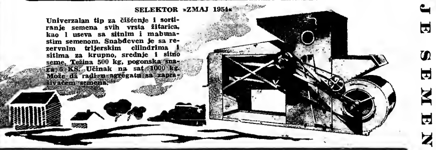


TRIJER

Čišćenje i sortiranje semena od svib nečistoća i urodice, sortiranje zrna po krupnoći sa uspebom obavija naš trijer. Ramska konstrukcija je od čelika, a ostali delovi od čvrstog čeličnog lima. Težina 300 kg. Učinak na sat 250 kg., broj okretaja pogonske remenice n minutu 50—60. Dimenzije: dužina 250 cm., širina 77 cm, visina 150 cm.

SELEKTOR »ZMAJ 1954«

Univerzalan tip za čišćenje i sortiranje semena svih vrsta žitarica, kao i useva sa sitnim i mabunastim semenom. Snabdeven je sa rezervnim trijerskim cilindrima i sitima za krupno, srednje i sitno seme. Težina 500 kg, pogonska snaga 6 KS. Učinak na sat 1000 kg. Može da radi u agregatu sa zaprašivačem semena.



DOBRU ŽETVU OBEZBEDIĆETE SORTIRANJEM SEMENA SA NAŠIM MAŠINAMA

• MAŠINE ZA SORTIRANJE SEMENA •

JEDNOOSOVINSKE PRIKOLICE ZA ZAPREŽNU I AUTO VUČU

PK-0

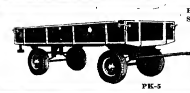
Fabrika izrađuje dva tipa ovih prikolica i to: PK-0 i PK-1. Opremljene su sa rudama za konjsku i auto vuču, koje se prema potrebi lako montiraju. PK-0 — korisna nosivost 0,25 tona, sopstvena težina 200 kg., dozvoljena brzina 70 km/b i gume 6×16". PK-1 — korisna nosivost 0,5 tona, sopstvena težina 280 kg., dozvoljena brzina 70 km/b i gume 6×16".

POLJOPRIVREDNA PRIKOLICA PK-2A

PK-2A

Namenjena je prvenstveno za zaprežnu vuču. Može se upotrebiti i za traktorsku vuču, pošto se izvuče ruda za zaprežnn vuču iz svoga ležišta. Snabdevena je ručnom kočnicom. Korisna nosivost 2 tone, maksimalna brzina 15 km/h. Dužina platforme 360 cm, a širina 160 cm. Sopstvena težina 530 kg. Gume 6,5×16".

POLJOPRIVREDNA PRIKOLICA PK-5 SA OKRETNICOM OD 360°



PK-5

Vrlo je pogodna za manipulacijn na raznovrsnim terenima usled pokretljivosti prednjeg trupa za 360°. Snabdevena je inercionom mehaničkom kočnicom. Korisna nosivost 3 tone. Maksimalna brzina 25 km/b. Dužina platforme 4 m, a širina 1,8 m. Visina bočnih stranica 45 cm. Sopstvena težina 930 kg. Gume 7,5×16".

TRAKTORSKA KIPER PRIKOLICA PK-6 SA OKRETNICOM OD 360°

PK-6

Poseduje »kip« uređaj za automatski istovar, te je prvenstveno namenjena za transport nepakovanog, kabastog materijala n poljoprivredi i građevinarstvu. Prikolica je konstruisana za nosivost od 3 tone, pri maksimalnoj brzini od 25 km/h. Dužina platforme 4 m, a širina 1,8 m. Visina bočnih stranica 45 cm. Sopstvena težina 930 kg. Gume 7,5×16". Kip uređaj omogućuje mehanički istovar na levu ili desnn stranu za oko 3 minuta. Sam uređaj ima dva radna cilindra koji preko bidrauličnog pritiska vrše dizanje platforme na željena stranu do maksimalnog nagiba od 45 stepeni.

BRZ I LAK TRANSPORT SAMO SA PRIKOLICAMA „ZMAJ"

ZMAJ-ZEMUN 1945

ZMAJ

FABRIKA POLJOPRIVREDNIH MAŠINA ZEMUN

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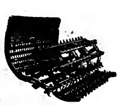
VRŠALICA J. V. 1070

Gvozdene konstrukcije, građena od [illegible] snog čelika. Vrše sve vrste žitarica [illegible] njim dopunama i seme kru[illegible] kultura. Sa dopunskim ur[illegible] šaj pirinča, deteline i l[illegible] Bubanj dužine 1070 mm, prečnika [illegible] broj šina [illegible] komada, broj obrtaja u min[illegible] 1079. Učinak na sat 1800—2000 kg. Pogonska snaga [illegible] KS.

UREĐAJ ZA VRŠAJ PIRINČA

Za krajeve gde se gaji pirinač sa dopunskim uređajem za vršaj pirinča može se sa lakoćom i malim izmenama obavijati vršaj i ovog useva. Glavni bubanj sa šinama zamenjnje se jednim zupčastim bubnjem i korpom.



[illegible] DETELINE

Seme lucerke je smešteno n mahunama, koje se od slame mogu omlatiti glavnim bnbnjem na vršalici, ali se istim ne može oslnboditi seme, koje je sitno i sakriveno u uvijenoj mahuni. U dopnnski nređaj za vršaj deteline spada: dopunski bnbanj, spirala sa eksbaustorom i ventilatorom za odvajanje mahuna n dopnnski bubanj. Dopunski bubanj se lako mnntira i ima zadatak da omlaćene mahune u glavnom bubnju odvnji od semena.

N A   Z A H T E V   K U P A C A
V R Š A L I C E   I S P O R U Č U J E M O   S A   C E R A D A M A

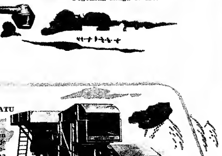
• VRŠALICA J. V. 1070 • UREĐAJI •

VRŠALICA J. V. 1385

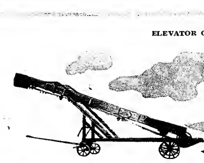
Prilagođena za ravnije terene i veća [illegible] redna gazdinstva. Obavlja vršaj: žita, graška, pasulja, olajne repice itd. Poseduje mehanizam za automatsko odvođenje pleve pomoću ekshaustora. Bubanj dužine 1385 mm, prečnika 625 mm, broj šina 8 komada, a broj obrtaja u minutu 1000. Učinak na sat 4000 kg. Pogonska snaga 30 KS.

VRŠALICA J. V. 1070 U AGREGATU SA GNJEČILICOM ZA SLAMU

Konstrukcijom ove gnječilice upotpnnjen je asortiman naših uređaja i sprava, koje se montiraju uz vršallcu J. V. 1070. Gnječilca može da radi kao posebna mašlna i u agregatu sa vršalicom J. V. 1070 stavlja se u pogon preko jedne dopunske remenice što ne zahteva nikakve izmene. Kapacitet odgovara kapacitetu vršalice, tako da je obezbeđen ravnomeran posao. Gnječilica istovremeno gnječi i secka slamu, tako da je stoka radije uzima i bnlje koristi n organizmu.



ELEVATOR OD 42"



U agregatu sa vršalicom služi za dizanje slame na kamare pri vršidbi ili kao posebna mašina za dizanje sena i sličnog materijala na kamare, tavane i šupe. U agregatn sa vršalicom prima pogon od osovine slamotresa sa vršalice. Za pogon elevatora kao posebne mašine potreban je motnr jačine 3—4 KS. Težina 1000 kg., visina dizanja 8 metara. Radna širina 107 cm.

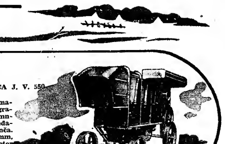
P R I L I K O M   R A D A   D R Ž I T E   S E   T A Č N O
U P U T S T A V A   O   R U K O V A N J U

VRŠALICA J. V. 660

Srednjeg je kapaciteta. Ima sve elemente standardne vršalice, kao: bubanj, podbubanj, dva čišćenja, elevator, gruvač za otstranjivanje osja i dr. Bubanj dužine 660 mm, prečnika 530 mm, broj šina 8, broj okretaja u minutu 1150. Učinak na sat 500—700 kg. Pogonska snaga 9—12 KS.

VRŠALICA J. V. 550

Namenjena je za vršaj žitarica, a sa manjim izmenama može da vrše: pasulj, grašak, suncokret, soju, olajnu repion i mnbar. Snabdevena je sa dnpunskim nređajem za vršaj lucerke, detelne i pirinča. Bubanj dužine 550 mm, prečnika 445 mm, kapaciteta 350—400 kg/b, potreban motor 4—6 KS, sopstvena težina 640 kg.



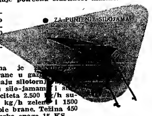
UNIVERZALNE SEČKE I ČIJALICE

● ZA PODIZANJE HRANE U TORNJEVE

Seckaju i čijaju stočnu i zelenu kabastu hranu. Pripremaju je mebanički za neposrednu upotrebu, kao i za siliranje, te je stoka može lakše da uzima i bnlje koristi u svom organizmu. Unlverzalne sečke i čijalice »Zmaj« imaju dva točka za transport. Na prednjem kraju mašine ispod rude, pričvršćen je podupirač, koji obezbeduje potrebnu stabilnost mašine.

Služi za podizanje prerađenog materijala na visinu do 10 metara u silotornjeve, tavane i dr. Kapaciteta 2100 kg/b snve i 8.900 kg/b zelene hrane. Težina 850 kg. Pogonska snaga 25 KS.

● ZA PUNJENJE SILOJAMA



Namenjena je [illegible] manje hrane u gaz[illegible] koja nemaju silotornj[illegible] siliraju u silo-jamam[illegible] i s[illegible] no. Kapaciteta 2.500 kg/h suve, 1.200 kg/h zelene i 1500 kg/h krtoie brane. Težina 450 kg. Pogonska snaga 15 KS.

S V E   M A Š I N E   R E D O V N O   P O D M A Z I V A T I
I   P R I T E Z A T I   Z A V R T N J E

• VRŠALICE: J. V. 660 i 550 • UNIVERZALNE SECKE •

ZMAJ-ZEMUN 1945

ZMAJ
FABRIKA
POLJOPRIVREDNIH
MAŠINA
ZEMUN

TELEFONI:

Centrala:	37-407
	37-408
	37-409
	37-018
	37-552
Direktor.	37-350
Kom. direktor	37-568
Teh. direktor	37-957
Računovodstvo	37-367
Prod. odeljenje	37-055
Nab. odeljenje	37-784
Prop. odeljenje	37-576

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